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USSR Report

ENERGY

No. 95

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DNESTROVSKAYA GES PROGRESS REPORT

Moscow PRAVDA in Russian 21 Nov 81 p 2

/Article by S. Bogatko, special correspondent for PRAVDA, Novodnestrovsk, Chernovitskaya Oblast: "The Prevailing Height"7

> /Excerpts7 In August of last year we discussed how the new electric power "fortress" is being built - the Dnestrovskiy hydrotechnical complex.
>
> Since then great changes have taken place. The pace of the work has picked up. This fall, on 24 October, the river was spanned. Now as the days become shorter and colder and there is an increased demand for electric power and every kilowatt becomes valuable, the hydrosystem builders are hurrying to provide the current to two of the first generators by December, the busiest time of the year for power systems.

But the most important "height" is now below the water level. The installation of the hydrogenerators is proceeding in difficult conditions: the dam is not finished and its design is such that the spillway must in essence become the roof of the machine room. We went there with one of the most experienced turbine operators, Fedor Ivanovich Fedorov, to the place where the waters of the Dnestr River must soon turn the rotor. Having squeezed between the blades of the drive equipment, we shined a flashlight on the turbine which is motionless for the time being and which resembles a gigantic meat grinder.

Fedorov commented, "From each of these blades one could stamp 30,000 rubles."

Surprised by this unexpected comparison, I ask him, "But for a ruble the metal probably costs less?"

Fedor Ivanovich laughed, "Scarcely. This is a special steel capable of functioning in conditions of corrosion and cavitation. And the entire piece of equipment - the stator, the rotor and the outer casing - require materials with special properties.

"Besides, there is not enough of even the most ordinary grades of metal. For this reason the construction project has never been on schedule. From May through July the situation was very threatening. There was a breakdown which we were barely able to overcome. Even now metal is literally coming in right off of the railroad cars. When my people receive a batch of rolled metal they pounce upon it like starving people would for bread. At night an order is made for the brigade; in the morning the metal is hauled to the foundation pit; during the day the fittings are welded; and by evening everything has been put into concrete."

How much labor, materials, machinery and fuel has to be expended for the construction of a GES! But for some reason people have long thought that hydroelectric power stations produce almost free power. The builders recall an incident when the announcer from the Central Television organization asked that if additional light is not needed or if an electric appliance is not being used then one should turn them off. Of course, not everyone heard this or rushed to carry out the request and, of course, no one remained sitting in the light of a torch. However, even the least effort would be enough to make up the output of two Dnestrovskaya GES's.

Even the most convincing evidence has little effect in day-to-day living. This is not only true of the home and the factory, but also of the power workers and designers themselves. PRAVDA has already written that at a "buffer" dam of the well-designed Dnestrovskiy complex one can obtain an additional 15,000 to 20,000kilowatts, which would be enough to supply two or three agricultural regions with electricity. The opinion of the chief engineer of the project, B.D. Shmul'son, that it is inadvisable to install turbines here is seen as completely unconvincing. It is simply that no one wants to bother with a "small" construction project. But is it really easier to ship thousands of tons of coal here from Siberia, when at the same time there are dozens of cubic meters of water per second passing by from above.

The Dnestr River area is a rich and densely populated area. The construction on the Dnestr River has invigorated the economy. As many as 500,000 hectares of Ukrainian and Moldavian fields, dozens of cities and villages will receive moisture from the reservoir. New livestock complexes have been built. Enormous orchards have been planted and fruit processing enterprises are being built. In three to four years fruit will be leaving here in a steady flow: trucks to the center and by aircraft to the north.

The first two units of the Dnestrovskaya GESS will begin operating in December at a reduced pressure. In 1982 two more units will be put on line; and in 1983 the last two - the fifth and sixth power units - will be in operation. The full rated capacity of the GES is more than 700,000 kilowatts.

The situation promises success. The base has been created and a strong collective has been established, for which the time has come to gradually move on to a more serious task - the construction of a water storage electric power station, a GAES. All work at the complex is now proceeding more rapidly, cheaply and with greater efficiency. A GAES with a rated capacity of 2.2 million kilowatts will be of national importance, not just local or republic significance. It is important only that time not be lost and that the heights that have been won not be lost.

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ELECTRIC POWER

WATER STORAGE ELECTRIC POWER STATION CONSTRUCTION IN ZAGORSK

Moscow KRASNAYA ZVEZDA in Russian 21 Nov 81 p 3

/Article by S. Borisova, from the press center of the USSR Ministry of Power and Electrification: "Stored Energy"/

> /Text/ In the Basic Directions for the Economic and Social Development of the USSR from 1981 through 1985 and the Period up to 1990 we find the following lines: "to accomplish the construction of a water storage electric power station /GAES/ in the European portion of the USSR."
>
> The first such power station of industrial significance is being built near Zagorsk in Moscow Oblast.

The scale of this construction project is such that it is difficult to take it all in with a single glance, even if, as they say, one looks upon it from the upper point. And when the nearly one kilometer in length earthen dam of a 30 meter height bridges the bed of the Kun'ya River, a gigantic reservoir will be created here: 30 million cubic meters of water. But this will be only the lower basin of the new power station. At the top of the hill, at a height of 100 meters, an almost identical upper basin is being built. Such will be the Zagorskaya GAES. The rated capacity of the power station will be 1,200,000 kilowatts. Its intended purpose is to cover the "peak" portion of the load of the unified power system of the Center.

Everyone is familiar with the expression "peak load". In the mornings when equipment is switched on at hundreds of enterprises at the same time; in the evenings when electric lamps flicker in the windows of private residences and the television screens are lit and on the streets the neon lights and street lights are burning, the expenditure of electric power rises sharply. It is this "peak" that provides the power industry workers with quite a few problems. The television sets of Moscow alone "consume" 1,200,000 kilowatts in a single evening.

A regulator is needed. But what kind? A new type of electric power station comes to the assistance of the power system - the GAES. It will become a sort of "warehouse" where it will be possible to save surplus energy, that was generated over night to be used during the "peak" hours.

The concept of the GAES is simple: two connected basins are placed one above the other with a drop in height of 100 meters. During the night, when there is a surplus of power, water is pumped from the lower basin into the upper basin. Then during the "peak" hours, when there is a shortage of electricity, the gates in the water conduits are opened and powerful jets of water fall upon the turbines, or to be more precise, upon the turbine pumps. These "inverter" units, with a rated capacity of 200,000 kilowatts, can operate both in a pumping mode (by pumping water to a height of 100 meters) and in turbine mode (while producing an electrical current).

Such units are essentially a new word in Soviet machine building. The first of them is now being manufactured in Leningrad especially for the Zagorskaya GAES.

The chief of the construction project, L. Tolkachev, told us, "We have encountered many technical problems. One of these problems has been the creation of deep, up to 100 meters and more, foundation pits in so-called flooded earth. Our primary 'enemy' - the high water and ground water as well as earth creep - has given us a lot of trouble. We are faced with an enormous amount of earth moving work - nearly 40 million cubic meters."

To what we learned from the chief of the construction project, we must add: the specialists also have other very complicated problems. For example, the construction of the pressure pipelines, which will connect the upper and lower basins. There will be six of these "threads" with a diameter of 7.5 meters. They will be constructed of reinforced concrete units weighing as much as 200 tons. In the Soviet Union there is no experience in installing such water conduits. By the way, such work will be accomplished near Zagorsk for the first time in the practice of world hydroelectric power station construction.

The Zagorskaya GAES today is not just a gigantic construction project. It is a test range where new technical solutions are being checked and uncommon methods of performing installation are being developed.

The GAES is to become the leader: once it is completed it is planned to build more than ten water storage electric power stations for the unified power system of the Center alone. The Kanevskaya GAES will go up on the Dnepr River. On the Shopshe River near Leningrad work has been started on the construction of the Kayshyadorskaya power station near the Kaunasskoye Sea. The Kayshyadorskaya GAES will provide an additional 1,600,000 kilowatts to the power system; the Kanevskaya GAES will add 3,000,000 kilowatts.

While accepting surplus power from the atomic and thermal electric power stations and forcing the power turbines to operate at maximum output, the water storage electric power stations will provide a significant savings of fuel within the framework of the power system. The Zagorskaya GAES alone will make it possible to save 200,000 tons of conventional fuel each year.

At the Zagorskaya GAES concrete is being poured into the building of the future power station. The builders have started work on the heart of the GAES - the machine room. The power station is to be operational in 1983; and by the end of the five-year plan it will be operating at full capacity.

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MARYYSKAYA GRES CONSTRUCTION REPORT

Moscow PRAVDA in Russian 7 Dec 81 p 1

/Article by A. Grachev, PRAVDA correspondent, and V. Veys, from the editorial staff of the newspaper MARYYSKAYA PRAVDA, Turkmen SSR: "On the Map of Construction Projects: A Giant in the Karakum"/

/Text/ The Turkmen builders have achieved new success: power unit No 6 of the Maryyskaya GRES has started producing electric power. With its start up concludes the construction of the first section of the largest thermal electric power station in the Turkmen SSR. Its rated capacity is now 1,260,000 kilowatts. The powerful supports of the high voltage electric power transmission line, which has moved some 350 kilometers through the desert to the Kirghiz city of Kara-Kul', have joined the power station with the power system of Central Asia.

The Maryyskaya GRES owes its existence to the creation of the Karakumskiy canal. There was enough natural gas here, but no water. Without water the power station was unable to operate. Only when the man-made river came did they commence work on the power giant.

Since that time ten years have passed. To have built six power units within such a period of time is a great accomplishment, which was achieved through the adoption of advanced methods of labor, clear organization of production and the efficient use of resources. For example, the brigade of installers headed by G. Razyev was the first to implement the cost accounting system /khozraschet/, which made it possible to free ten men for other operations and to reduce the amount of time required for installing equipment. The initiators were then followed by the collectives of V. Vershinin and K. Berdymuradov - and then all of the others.

They concluded cooperative contracts among themselves; and executive discipline rose. People began to do a better job, while consistently fulfilling their assignments. Many of them switched to the brigade khozraschet system.

The chief of the Maryyskaya GRES, Ch. Isayev says that, "the 'workers' baton" played a special role. It seemed that the entire nation was participating in the urgent construction project; and we constantly sensed the influence of the excellent labor cooperation. From the Uzbek SSR and the Azerbaijan SSR came experienced installers. Workers in Leningrad and Khar'kov shipped the turbines on time; and the workers from Zaporozh'ye sent the transformers. From Belgorod came the high pressure pipelines and the instruments came from L'vov. The institutes of many cities developed the technical documentation.

Now the Marvyskaya GRES is the power heart of the Turkmen SSR. It is producing 80 percent of the electricity in the republic. More than 50 cities and workers' settlements, dozens of kolkhozes and sovkhozes located near the Karakumskiy canal are receiving electricity from the power station. Power unit No 6 will fully supply the eastern regions of the republic with energy.

S. Nuryyev, the director of the power station notes that, "In addition more than two billion kilowatt-hours of electricity we will transfer each year to the Central Asian power system. This means that the reliability of the electric power supply for the Uzbek SSR, the Kirghiz SSR, and the Tajik SSR will be increased. What is more our electric power is relatively inexpensive because there is a natural gas deposit nearby."

Not far from the GRES a beautiful companion village has appeared - Energetik. The collective of the power station bears the title of the collective of Communist Labor; and the GRES itself has become an enterprise of a high quality of production. The practices of making suggestions for improving methods has come to be used extensively. One out of six workers is participating in this effort. The effort to conserve has become the duty of everyone: this year they have saved more than a million kilowatt-hours of electric power.

The natural stored gas, an experienced collective, which has learned to build complicated facilities, and a growing requirement for energy - all of this is making it possible to proceed to the construction of the second section of the GRES, bringing its rated capacity to 2.5 million kilowatts.

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ELECTRIC POWER

FUTURE CONSTRUCTION PLANS EXAMINED

Dushanbe KOMMUNIST TADZHIKISTANA in Russian 8 Dec 81 p 2

[Article: "The Energy Potential of the Republic"]

[Text] [Question] What are the prospects for the development of the power industry in the Tadzhik SSR in the near future?

[Answer] They are an important part of the tasks assigned by the recent Party congresses. Within the republic there will be a great deal of energy-related construction. Even now work on the Baypazinskaya GES is proceeding at forced rates; this will be the sixth electric power station on the Vakhsh River. In will operate in concert with the Nureksmaya GES. I want to remind you that the work of the Baypazinskaya GES will be controlled from a control panel via a television system at the Nurekskaya GES. This will significantly raise the output of electric power on the Nurekskaya machinery during the "peak" morning and evening hours. While using the experience of the Nurek workers, the builders of the new power system have decided to reduce the period of time for introducing the GES by one year. The opportunity for conserving 840,000 tons of conventional fuel, valued at 15 million rubles, has presented itself.

Work on the Rogunskaya GES is now getting underway along a broad front. In time it will be the most powerful hydroelectric power station in Central Asia and one of the largest in the USSR. I will cite only one figure. The Rogunskaya GES will begin producing 14 billion kilowatt-hours of electric power each year.

Along with the construction of generating capacities in the 11th Five-Year Plan network construction will be undertaken. Now in the republic there is no kolkhoz, settlement or remote location that does not have electricity. Powerful high-voltage power transmission lines have been installed, the length of which is 41.500 kilometers. The first link of the LEP-500 from Nurek to Tursunzade is the pride of Soviet practice in the construction of high-voltage electric power transmission lines. In the near future the second link of this line will be in operation. It will make it possible to more efficiently use the electric power of the Nurekskaya GES and it will feed it into the unified power grid of Central Asia.

The power industry workers of the Tajik SSR have done a good job in the first year of the five-year plan. Within the first eleven months of the year the power industry enterprises of the republic produced 12.5 billion kilowatt-hours. This amount of electricity was produced in the entire 8th Five-Year Plan.

The labor watch, which has been devoted to realizing the decision of the 26th Party Congress, has listed many names of the leading workers. Here are only a few of them. The outstanding specialists in their field in our sector of the economy include water storage specialist from Dushanbe's Vakhshskoye enterprise of electrical circuits, Hero of Socialist Labor S. Kurbanov; recipient of the Order of Lenin R. Radzhabov; electrician P. Shamionov; and meritorious power enginner of the Tajik SSR A. Borodin.

The republic's power industry workers and workers from throughout our republic recognize that they are in the front line in the building of Communism. Today our primary task is to successfully complete the assignment for 1981, the first year of the 11th Five-Year Plan, and to move on to 1982 with renewed vigor. This will be our response to the challenge of the 26th Party Congress - to labor in such a way so as to make our nation even more beautiful and so that the lives of our people become richer and more interesting.

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THERMAL STATION IMPROVEMENTS TO LOWER FUEL EXPENDITURE

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 22 Dec 81 p 2

[Article by Yu. Semenov, deputy minister of USSR Power and Electrification: "Economical Power Engineering"]

[Excerpt] The greatest user of coal, gas and petroleum products is power engineering. More than half of the country's consumption of boiler and furnace fuel falls to that industry. Here's just one figure: If the input of fuel going to produce each kilowatt-hour of electric power is reduced by one gram, we will save the country as much as a million tons of conventional fuel a year.

Marked progress was achieved here during the 10th Five-Year Plan--the specific fuel input was lowered from 340 grams to 328 grams. The potential is far from being exhausted though. According to the experts' predictions, by 1985 this index can be cut another 7-9 grams. The thermal stations of USSR Minenergo [Ministry of Power and Electrification] will produce 1,020 billion kilowatt-hours of electricity by then. This will make it possible to save in 5 years more than 12 million tons of conventional fuel.

What are the principal ways of raising the level of economy of thermal electric power station operation?

To begin with, there is the technical re-equipping of the industry, the introduction of more efficient machinery in place of obsolescent equipment. Thus, during the last five-year plan a substantial effect was gained from putting into service new power generating units of 300, 500 and 800 megawatts capacity with supercritical steam parameters. This process will be continued during the current five-year plan as well. Improvement of the structure of power production should come about through increased introduction of these units with the simultaneous retirement of low-efficiency equipment.

The rebuilding and modernization of existing equipment will supplement the renewal of the industry's machinery. During the last 5 years we managed to save over 3 million tons of conventional fuel due to improvement of individual assemblies of steam generators and turbines at a number of electric power stations. The best results in this regard were achieved by the collectives of the Zaporozhskaya, Reftinskaya, Troitskaya, Iriklinskaya and Kostromskaya GRES's. Complex modernization of power generating units yields the greatest effect. For example, at the Karmanovskaya GRES, where units of 300 megawatts capacity were installed, the specific fuel input was thereby reduced by 21 grams and around 40,000 tons of conventional fuel were saved for each generating unit. That amount is enough to produce electric power for the household needs of a city of 400,000 for a year.

A priority task of the technical services of USSR Minenergo is the complex modernization of the majority of active generating units. Calculations indicate this will succeed in saving, in the course of a year, more than 1.5 million tons of valuable fuel.

The technical re-equipping of power production is proceeding at as yet inadequate rates, however. A rather large inventory of low-efficiency equipment is in operation at stations even now. The specific fuel input here runs 500-600 grams--nearly one-and-a-half times over the industry average. Herein lies the main reason our thermal stations have this year overexpended more than a million tons of conventional fuel. Obsolescent and worn out machines are being replaced by new ones slowly, at a rate of less than one percent a year. In this we are lagging behind other sectors of industry substantially. It is necessary to move more decisively on the withdrawal of this equipment, on dismantling it or mothballing it.

Great potentials for saving are embodied in the further development of district heating. District heating power generating units able to quickly come up to maximum thermal load on a substantially less specific input of fuel are going to be put in service at TETs's during the 11th Five-Year Plan. This will make it possible to eliminate the small, low-efficiency boiler houses and connect the consumers to the neighboring heat and electric power stations. Taking the small boiler houses and furnaces out of operation will also provide the opportunity to better organize fuel-input accounting.

A TETs can be considered efficient, though, if the district heating capacity of a turbine is used no less than 55-60 percent. There are, meanwhile, no few heat and electric power stations where this index is substantially lower. The Pavlodarskaya TETs-3, for example, delivers heat to consumers a total of 965 hours, i.e., one month in a year. Then, the Ferganskaya TETs record for heat load is even worse--350 hours, a half a month out of the 12! Of stations such as these, not being used to full capacity, there are 19 in the Glavtsentrenergo system alone; and there are 9 such in the Glavuralenergo system.

This is explained primarily by the fact that the district heating capacity of TETs's in the planning stage, being governed by requests of industry sector ministries, often turns out to be overstated. Thus, it was anticipated that Ferganskaya TETs heat would be drawn on by the Fergannefteorgsintez and Azot Production Associations and the Chemical Fiber Plant imeni the 50th Anniversary of the USSR. The true needs of these enterprises, however, proved to be an order of magnitude less than those indicated in the TETs planning assignment. There's a similar situation in Pavlodar where an oil refinery and the Tractor Plant imeni V. I. Lenin are repudiating their own requests. With regard to the Yerevanskaya TETs, the heat of which is being used at the 10-percent level, its major consumer--the Kirovakanskiy Chemical Fiber Plant, to which the planners were principally oriented--hasn't been built yet.

The low level of utilization of TETs district heating capacity is also sustained by the lag in construction of heat distribution networks. USSR Gossnab is not releasing pipe for their construction to Minenergo in full volume. And effective methods of protecting the pipes from corrosion haven't yet been found. The heat insulation structures, which are manufactured at enterprises of the Ministry of the Construction Materials Industry, break down quickly.

The economic indexes of our stations are governed to a large extent by fuel quality. Unfortunately, the characteristics of the coal being supplied to thermal stations have deteriorated in recent years. The calorific value has gone down and the ash content and moisture have gone up. This leads to the excessive consumption of coal, a drop in the efficiency of the boilers and shutdown and repair over and above that planned for. Thus, power generating units intended for operation on hard coal, because of the changeover to low-calorie coal, burn some 10-12 grams per kilowatt-hour more fuel than the projected standard. With a 10 percent increase in the ash content of Ekibastuz coal, boiler efficiency drops 1.5 percent on the average; i.e., the specific input of fuel goes up.

We understand that the deterioration in the quality of the coal is, to a certain degree, due to objective causes. For that reason, the power engineers are doing a lot of work on the maximum possible adaptation of boiler equipment to the fuel actually being used. The technologists and designers of Soyuztekhenergo, the All-Union Institute of Heat Engineering imeni F. E. Dzerzhinskiy and the Central Design Bureau of Glavenergoremont are looking for ways to update fire box systems and other equipment. Power generating units designed for the burning of fuel with degraded characteristics are already operating at the Ekibastuzskaya, Yermakovskaya and Reftinskaya GRES's. Special measures are to be carried out at the Zmiyevskaya, Starobeshevskaya and Krivorozhskaya GRES's. This and everything else, all put together, will enable a savings of 20-30 thousand tons of conventional fuel a year at each station.

Effective means for cleaning the heating surfaces of boilers are being developed. Soyuztekhenergo, jointly with the All-Union Institute of Heat Engineering and the Kotloochistka Plant, is issuing the needed guidance and procedure materials and aiding power systems in setting up new equipment in order to implement those means quickly. Because of this, a weighty contribution to the power stations' coffer is expected during the current five-year plan--more than 300,000 tons of conventional fuel saved.

On the other hand, the delivery of lower quality coal to the thermal electric power stations inflicts on the country's national economy a considerable loss which exceeds the savings on capital investment in the coal industry from giving up refining of the fuel at the points where it's extracted. Moreover, hauling the coal along with the gangue requires extra cars and treatment of it at the power stations is far more costly.

Minenergo regards as advisable a comprehensive examination of the question of establishing so-called blending complexes in the Donetsk, Kuznetsk, Ekibastuz, Moscow and certain other coal basins, and also the question of expanding here the network of treatment enterprises. These measures should be supported by strict, universal monitoring of the quality of the coal intended for burning in pulverized form at thermal electric power stations and at heat and electric power stations.

For their part, the power engineers are exerting maximum effort to put into operation all available fuel-saving potentials. And they lie in the further upgrading of the performance level of operative power equipment, and in the upgrading of steam and condensate quality, and in the automation of all technological processes--from unloading of the fuel to distribution of load among power generating units. The rational utilization of fuel has been and continues to be one of the most important problems thermal energetics in the 11th Five-Year Plan.

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BUILDING REGULATIONS OVERLOOK LIGHTING SPECIFICATIONS

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 25 Nov 81 p 2

[Article by Ye. Trublenkov, engineer, MoszhilNIIproyekt (Scientific Research Institute for Planning Housing in the City of Moscow): "Is a Sea of Light Always Necessary?"]

[Text] SOTSIALISTICHESKAYA INDUSTRIYA has carried talk before on how to lower consumption of power for lighting entrances and stairways. This, in particular, was the subject of the letter from M. Tendler of Leningrad, "The Little Light in the Entranceway," published on 5 May this year. The nature of my work keeps me constantly occupied with such matters. For that reason, I want to offer the readers some considerations of my own.

First off, we'll try to picture how much electricity the little lights in the entranceway burn. Within the nation's overall balance of electric power, 12 percent of all the useful electricity produced goes for housing and public utilities. Residential light systems, in turn, are the most power consuming users in this category. In Moscow alone, 280-300 million kilowatt-hours a year are expended for these purposes.

Is it possible to cut down on such substantial consumption? Quite so, it appears. I'll begin with a prime consideration. In the last edition of the Construction Norms and Regulations (SNiP), effective 1 January 1980, there are no norms for stairwell lighting. This puts the service organizations in a very difficult position for it's not known what bulbs are to be used. The residential lighting planners, too, wind up in the same situation: the absence of lighting norms more or less authorizes the use of any size bulb, including stronger ones, and defeats the function of the inspection agencies.

If one reverts to the norms previously in effect, they have serious deficiencies too. Do we really have to brightly illuminate an elevator foyer and a landing between floors? Especially today, when houses are growing ever upwards and people are using stairways less and less? It appears we don't. By installing smaller bulbs on the landing we'll save electricity without inconveniencing the residents at all.

This isn't the first time that there have been conversations about varying residential illumination relative to time of day. But, unfortunately, the matter has gone no further than discussion, though technical decisions were in fact worked out a long time ago by MoszhilNIIproyekt together with the Academy of Municipal Services (the SDO-79 residence lighting system). It provides for a rational reduction in the level of illumination during nighttime hours via a reduction of voltage at the light sources. This guarantees saving electricity and a longer bulb life. There's nothing complicated about implementing this proposal what with the existing automatic control systems for residential lighting.

Of course, to reduce the light without its being disadvantageous for people is feasible only at night, say, from 2400 to 0600 hours. Bulbs on landings can be turned off during that time.

Another thing. In neither the old nor the new Construction Norms and Regulations did I find a norm for natural illumination for residences. So this means that the planners can with clear conscience lay out stairwells with narrow embrasures instead of normal windows--which, by the way, is often the case in practice. Then later on there has to be an additional outlay to light them!

There's no answer to this question either: Just when, and at what level of natural light should artificial light be turned on or turned off? Clear-cut standardization here offers real potential for savings too.

It's not by chance that I go back again and again to the Construction Norms and Regulations. The saving of or, conversely, the overconsumption of electricity for lighting depends to a great extent on the principles set forth in them. And it appears the time has come to reexamine those items having to do with lighting our entranceways.

Of course, the solution of this and the other problems raised here isn't going to come overnight. It can only be done with the full participation of many organizations. But the need for this work has long been ripe. The benefit is obvious: By our calculations it's possible to achieve in Moscow alone a savings of 100-120 million kilowatt-hours of electricity a year.

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ELECTRONIC AIDS FOR CENTRAL HEATING HELP ENERGY CONSERVATION

Moscow IZVESTIYA in Russian 16 Jan 82 p 1

[Article by A. Kleva, IZVESTIYA correspondent: "Electronics Saves Energy"]

> [Text] In Ulan-Ude, remodeling of the Teplopribor [Heat Instruments] Plant--the nation's sole supplier of systems and equipment for the automation and protection of heating networks--has gotten under way.

More than a thousand heat and electric power stations are providing central heating for cities of this nation. This makes possible an annual savings of 35 million tons of conventional fuel. The further practical realization of this important national economic task depends on the development of conditions for the rational distribution and utilization of the thermal energy and the elimination of losses. For this purpose we need a system of devices which can assume the functions of stokers. This has become especially apparent during the past winters' heating seasons. Trouble occurred in a number of cities. One reason for it was the lack of accounting on heat supply, distribution and demand at points of automatic regulation and instrumented monitoring.

There is, in reality, still very little of that kind of equipment in the country. It's possible to increase the output of it in Ulan-Ude only by expanding production. A collective headed by V. Nimayev, deputy of the Buryatskaya ASSR Supreme Soviet, has been seeking out potentials constantly in the last few years. The casting department has been retooled, stamping, numerical-controlled machine tools and vacuum furnaces have been introduced, they've found a use for laser equipment, started up a shop for assembly of microcircuits.... In collaboration with the Soyuztekhenergo Association they've established a special design section headed by inventor Yu. Glukhoyedov. Engineers Yu. Krivoshchekov, A. Khazagayev, pattern maker K. Bryanskiy and others, assisted by specialists of the Orlovskiy Special Design Bureau, have developed seven new units, and have modernized the electrohydraulic converters and fast-acting valves.

The search for available potential has helped strengthen technological discipline and good working conditions with high standards of production. As a result, with no increase in personnel the annual output has risen by 3 million rubles and 35 percent of the products are certified with the Emblem of Quality.

"Everyday care for the workers has undoubtedly had a telling effect," remarked V. Ubeyev, gorispolkom chairman. "This year we'll have dormitory facilities for around 450, we're getting ready to build living quarters right at the plant, plans are being completed for a Young Pioneer town, private farms.... The number of our workers will grow to 2000, you know. New production areas are going to extend to 30,000 square meters...."

The plant expansion will make it possible, during the current five-year plan, to triple the output of equipment for residential, public and industrial use. Just that many "electronic stokers" will help the nation to save annually up to seven percent more fuel and power resources.

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BRIEFS

HEAT MANAGEMENT POLEMIC--The need is ripe for putting in order the service which manages heating operations for cities and large towns. Having reviewed the article, "How to Save Heat" (No 172), The USSR Ministry of Power and Electrification feels that it properly portrays the technical difficulties of regulating centralized heat supply systems. A number of reasons are involved, including the lack of installed regulation of heating systems, the low quality of the regulating hardware on the heating equipment and poor organization of the running of heating operations. In the heat networks that are on the Ministry's books, there is an annual adjustment and testing of all valve equipment at the heating points and at consumer lead-ins, and the temperature of the return water in the net is checked routinely. However, only 10 percent of the total length of heating nets in the country now belongs to the Ministry. The Ministry has at the present time developed proposals on adding to its holdings heating boiler capacity of 100 gigacalories an hour and the heating mains they feed. Before the end of the year, the Ministry, in conjunction with the Councils of Ministers of the Union Republics, is going to develop and submit to USSR Gosplan proposals for regulating the service managing the heating operations for cities and large towns. The suggestion by the article's author on organizing a joint service to run heating networks and heating systems at the enterprises of local soviets is one possible solution of the problem and will be studied. [Text] [Moscow IZVESTIYA in Russian 29 Nov 81 p 1] 5454

OIL FROM WASTE--The waste water produced during oil extraction itself contains a substantial amount of oil. For the more complete utilization of petroleum products, specialists of the Kazan Engineering Construction Institute and the Tatar Scientific Research Institute of Petroleum Machine Building developed a unitized hydroseparator for the purification of oilfield waste water. Water-oil emulsion is collected in the upper layers of the separators and drains down into oil recovery compartments. The oil is separated from the water in the compartments. The settling rate in this method of processing is two to three times faster than usual. After settlement, the oil products are pumped over into tanks for storage and the water is used again to flood the oil-bearing formations. [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 9 Dec 81 p 2] 5454

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FUELS

FUTURE PLANS OF UZBEK GAS INDUSTRY OUTLINED

Tashkent EKONOMIKA I ZHIZN' in Russian No 11, Nov 81 pp 31-32

[Article by A. Atadzhanov, head of the all-union industrial association "Soyuzuzbekgazprom": "Difficult Gas: Outlook for the Development of the Sector"]

[Text] The Uzbekistan gas industry has entered a qualitatively new and more complicated stage in its evolution. The reserves of sulfur-free gas are being depleted in the Gazli group of fields, and our raw material base is being shifted to new regions of the Mubarek and Shurtan groups of fields with enormous reserves of hydrogen sulfide-containing gas and complicated geological conditions.

The anomalously high formation pressure in the new fields is to 600 atmospheres. The gas formations are at a depth to 4,000 meters where the temperature is high. The gas contains agressive components, hydrogen sulfide, carbon dioxide, etc. All of this requires considerable expansion and construction of new, more complicated and labor-intensive gas and chemical complexes for the preparation and refining of gas, main gas pipelines made of special pipes of improved reliability.

An acute need has consequently developed in the Uzbekistan gas industry for development and implementation of a system to control scientific and technical progress which will guarantee mutual ties between production and science with regard for the effect of all the factors associated with developing the new fields.

We took the first step in this direction in the second half of 1979 when serious changes were made in the organizational structure of the republic's gas industry. An all-union industrial association of the gas industry and gasification in the Uzbek SSR was set up in Tashkent (the all-union industrial association "Soyuzuzbekgazprom").

For the first time in the system of the USSR Ministry of the Gas Industry, questions of drilling wells, extraction, preparation, refining, main transportation, underground storage and distribution of gas, gas supply and gasification, design and machine construction, planning and construction, science and others were concentrated in the framework of one association.

Not very much time has passed since the organization of our association, but one can already see that the initiative of creating it has entirely justified itself. The effectiveness of the reorganization consists of the possibility of solving all the complicated subsector problems of developing the gas industry and gasification as a single inseparable complex. Accurate fulfillment of the adopted decisions and the planned measures made it possible to intensify gas extraction to the maximum in a short time, increase its volume and the quality of refining, and also plan and rapidly control the main transportation and continuous gas supply of all the consumers. During the running of the new association, not only has the drop in gas extraction in the republic been successfully halted, but extraction has even significantly increased.

The work results of our association for 1980 also indicate the positive effect of the reorganization aimed at the maximum coordination of the activity of all the subsector organizations and enterprises. The state plans were overfulfilled for extraction of gas, gas condensate and oil. Basic funds for R 235 million were introduced.

The construction in intensified periods and start-up of the Shurtan gas condensate field and main Shurtan-Syrdar'ya GRES main gas pipeline with length over 400 km was the most significant and memorable labor feat of last year. This gas pipeline for transporting unpurified low-sulfur gas is the largest in our country. It currently guarantees shipment of the Syrdar'ya GRES gas in a volume of 11-12 million m^3 per day.

This was also the beginning of the establishment of Central Asia's largest Shurtan gas-chemical complex. The successful start up of its first phase was highly evaluated by the CPSU Central Committee. In his greeting on this occasion, Comrade Leonid Il'ich Brezhnev noted the selfless and creative labor of the workers, engineers and technicians, the workers of the planning institutes, and all participants in the construction. The warm words of greeting and the high evaluation of our modest labor give us strength and inspire us to new labor accomplishments.

In fulfilling their socialist commitments, the workers of the gas industry of the republic in June of this year put a unit of sulfur purification and a unit for production of sulfur with output of 294,000 T per year into industrial operation at the Mubarek gas refinery. In August, the Kuyu-Mazar-Mubarek GPZ [gas refinery] water line was introduced. It extends 98 km. Units of integrated gas preparation were installed at the Zevardy and Dengizkul-Khauzak fields , one unit for sulfur purification with output of 1.5 billion m^3 of gas per year, and a compressor station in Mubarek.

Completion of the construction-installation and start-up-adjustment work, start-up and development of the 43-kilometer segment of the Zevardy-Mubarek gas refinery gas pipeline, the third and fourth boilers BKZ-75/39 at the boiler of the Mubarek gas refinery, condensate pipelines, condensate quality control platforms with pumping station and other industrial facilities lie ahead. In addition, we have to introduce 50,000 m^2 of living area and facilities of social and cultural-general purpose in the city of Mubarek which are included in the third phase of the Mubarek gas complex, as well as facilities in the second phase of the Shurtan gas-chemical complex with output of 4 billion m^3 of gas per year.

All of this will not only allow us to compensate for the declining gas extraction for a number of fields, but also ensure its increase. This will be our practical contribution in 1981 in fulfilling the decisions of the 26th CPSU Congress to implement the program of expanding gas extraction in the country.

Further development of the Uzbekistan gas industry is associated with reserves of sulfur dioxide and its refining. We have consequently been set the task of executing a set of measures for the efficient use of all the raw material and all the valuable components contained in the gas. The extant technologies and equipment make it possible to refine gas with the production of methane, sulfur, ethane, compressed gases and condensate at the Mubarek and Shurtan gas-chemical complexes.

Our enterprises currently supply the country's national economy with sulfur and condensate, and do the preparatory work for the development of ethane and compressed gas production. The outlined program requires accelerated construction in the republic of facilities for refining gas raw material. This construction will be done according to the plans of the 11th and subsequent five-year plans.

The main volume of sulfur dioxide refining is concentrated at the Mubarek gas and chemical complex. For this purpose, its expansion has been planned for a volume of refining of up to 25 billion m^3 of gas per year by 1985. It is envisaged that this output of the complex will be maintained for a long time ahead.

The output of the Shurtan gas-chemical complex will be brought to 4.5 billion m^3 of gas refining per year by the end of this five-year plan. This, in turn, will promote more complete satisfaction of the growing demand of gas consumption of Uzbekistan, Kirghiziya, Tajikistan, southern Kazakhstan, the central region and the Urals.

With regard for all of this, we are focusing special attention on questions of the raw material base of the gas refineries. In order to guarantee extraction of the gas and its refining in the established volumes, it is necessary, in addition to the existing facilities, to build up the newly started-up fields of Dengizkul-Khauzak, Kandym and Saman-Tepe that are located on the boundary with the Turkmen SSR, and to expand our facilities in the fields of Shurtan, Zevardy, Alan, Pamuk and others.

The constantly maintained growth rate in the volumes of gas extraction have already permitted a very significant elevation in its specific weight in the republic's fuel balance.

It is necessary to build main gas pipelines of total length about 1,500 km in the 11th Five-Year Plan because of the rise in gas extraction and increase in gas consumption. About a thousand kilometers will have diameter of 500 mm and over. The Ursat'yevksaya-Fergana gas pipeline will already be put into operation this year, and next year, the powerful Syrdar'ya-Tashkent GRES gas pipeline with branches to Akhangaran and Almalyk.

Work has begun to expand and reconstruct systems of gas pipelines that transport gas to the Fergana depression. to Tashkent, Frunze, Alma-Ata and other directions. The percentage of natural gas in the republic's fuel and energy balance is constantly increasing. But the resources of gas are not unlimited. It is therefore important to efficiently distribute it among the consumers, and to use it with the maximum national economic effect.

The national economy obtains the greatest yield when natural gas is used as a raw material and production fuel.

Thus, for example, the use of gas in the chemical industry for the production of ammonia provides an average economic effect of R 76, about R 50 in the thermal processing of ammonia, and over R 40 for 1000 m^3 of gas in forging processes. It also bears results if gas is used in the smelting processes of ferrous and nonferrous metallurgy, in roasting processes for the production of construction materials, etc. The least effect, R 3.7 per 1000 m^3 results from the use of gas in power plants, large industrial and heating boilers.

The CPSU Central Committee and the USSR Council of Ministers have adopted a decree "On Intensifying Work for Conservation and Efficient Use of Raw Material, Fuel and Energy and Other Material Resources." The collective of our association is now aimed at solving the important tasks advanced in this important document.

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FUELS

TYUMENGAZPROM COLLECTIVES ADOPT 1982 COMMITMENTS

Moscow PRAVDA in Russian 8 Jan 82 p 1

[Article: "With Tyumen' Acceleration: Socialist Commitments of the Collective of the All-Union Industrial Association 'Tyumengazprom' for 1982"]

[Text] By implementing the historic decisions of the 26th Party Congress for forced development of the gas industry, and having been actively included in the socialist competition for early achievement of the extraction level of 1 billion m^3 of gas per day in the Tyumenskaya Oblast, the collective of the "Tyumengazprom" association has successfully fulfilled the commitments adopted for 1981 and provided the national economy with over 700 million m^3 of gas above the plan.

Guided by the instructions of Comrade L. I. Brezhnev in his speech at the November (1981) Plenum of the CPSU Central Committee regarding the need to surpass the set assignments for production of fuel and energy, the workers, engineering-technical workers and clerical workers of the association have adopted the following socialist commitments for 1982.

Through accelerated development of the Urengoy field, early start-up and efficient use of the production facilities in extraction and transport of gas, introduction of new equipment and the leading experience and perfecting production control they will guarantee the highest increase in gas extraction during the development of the gas industry in a volume of 35 billion m^3. They will provide the national economy with 1.5 billion m^3 of gas above the plan. They will overfulfill the assignment for the growth in labor productivity by 8 percent.

The collective will struggle for the efficient use of fuel and energy and other resources, conserve 100 million m^3 of gas, 118 million kW-h of electricity and 40,000 Gcal of heat. It will reduce the outlays for production and guarantee an annual above-plan profit of R 6.5 million.

The workers will overfulfill the assignments for introduction of new equipment, technology, automation and mechanization of the production processes, support in every possible way and disseminate the experience of the leading collectives and production innovators, improve the creative activity of the efficiency experts and inventors, and on this basis, obtain an additional economic effect of no less than R 4 million per year.

They will build ahead of schedule 245,000 m^2 of housing, preschool institutions for 1,520 places, schools for 1,970 places, 2 hospitals, 2 polyclinics, sanatorium-dispensary and other facilities. They will train 2,500 new workers of the leading occupations and improve the qualification of 4,500 workers.

They will ensure the further development of auxiliary services of the enterprises, put into operation 38,000 m^2 of greenhouses, increase the production of agricultural products and obtain 21,000 quintals of meat, 26,000 quintals of milk, 13 million eggs, and 6,500 quintals of vegetables.

The workers, engineering-technical workers and clerical workers of the Tyumenskaya Oblast gas industry assure the Leninist Central Committee of the Communist Party and Comrade L. I. Brezhnev personally that they will apply all their efforts, knowledge and experience to implementing the decisions of the November (1981) Plenum of the CPSU Central Committee, the party plans for the successful development of the country's fuel and energy complex, and will make a worthy contribution to the implementation of the great tasks of communist construction.

We call upon the collectives of the associations, enterprises and organizations of the gas industry, construction and installation organizations of the Ministry of Construction of Oil and Gas Industry Enterprises to expand even more the socialist competition for early fulfillment of the planned assignments for 1982 and the five-year plan as a whole, and mark by intensive labor the 60th anniversary of formation of the Union of Soviet Socialist Republics.

The socialist commitments were discussed and adopted at meetings of the association collectives.

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UKRAINIAN OIL REFINERY, PETROCHEMICAL WORKERS ADOPT 1982 COMMITMENTS

Kiev RABOCHAYA GAZETA in Russian 20 Jan 82 p 3

[Article: "Based on the Achievements of Science and Technology: Socialist Commitments of the Enterprises of the Ukrainian SSR Oil Refining and Petrochemical Industry for 1982"]

[Text] By implementing the historic decisions of the 26th CPSU Congress, the workers of the oil refining and petrochemical industry in the republic have fulfilled ahead of schedule the assignments for the first year of the 11th Five-Year Plan for the main technical and economic indicators by boldly utilizing the accumulated experience and widely developing socialist competition. The realized products above the plan totalled R 19.8 million. The specific weight of products with the state sign of quality reached 33.4 percent.

The workers, engineering-technical workers and clerical workers of the sector adopted as the working program of action the decree of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee "On All-Union Socialist Competition for the Successful Fulfillment and Overfulfillment of the Assignments of the 11th Five-Year Plan," the decisions of the November (1981) Plenum of the CPSU Central Committee, the sixth session of the USSR Supreme Soviet, the statutes and conclusions contained in the speech of the General Secretary of the CPSU Central Committee, Chairman of the Presidium of the USSR Supreme Soviet, Comrade Leonid Il'ich Brezhnev at the Plenum.

Having been included in the competition for a worthy meeting of the 60th anniversary of formation of the USSR, the workers of the oil refining and petrochemical industry of the Ukrainian SSR adopt the following socialist commitments for 1982.

Based on scientific and technical progress, perfection of the economic mechanism, more complete use of the internal reserves, they will complete fulfillment of the 1982 plan ahead of schedule, by 30 December and additionally realize products totalling R 10 million. They will produce above the plan 45,000 T of high octane automobile gasoline, 50,000 T of mazut, 44,000 T of diesel fuel, 10,000 automobile tires, 134 T of molded and nonmolded rubber technical items, 70,000 asbestos-technical items, 1000 T of technical-grade carbon, 36,000 pairs of rubber shoes, and R 5 million worth of consumer goods in retail prices. They will obtain an above-plan profit of no less than R 2 million.

The assignment for growth in labor productivity will be overfulfilled by 15.4 percent through the introduction of progressive forms of labor organization, the development of initiative and creative activity of the workers, engineering-technical workers and clerical workers, and the extensive use of the leading experience.

No less than 58 percent of all the workers will be encompassed by the brigade forms of organization and payment of labor.

The workers will improve the quality, and increase the technical level of the manufactured product. They will present for certification for the state sign of quality no less than 18 names of items and bring the specific weight of the products of the highest category of quality in the total volume of production to 34.5 percent.

By realizing the plans for technical re-equipping of production, they will comprehensively mechanize and automate 10 sections and start up 15 comprehensively mechanized production and automatic lines.

Based on the extensive dissemination of the experience of the collectives from the enterprises of the Zaporozhskaya Oblast, they will switch from manual to mechanized labor no less than 500 workers, including 100 people from heavy manual labor.

An economic effect totalling R 29.6 million will be obtained from the introduction into production of inventions and efficiency experts' suggestions.

The workers will continue their active struggle for efficient use of material and raw material, and fuel and energy resources at each work site. They will conserve 580 T of rubber, 150,000 m^2 of cotton fabric, 218 T of soda products, 48 million kW-h of electricity, 132,000 Gcal of heat and 66,000 T of conventional fuel.

In fulfilling the integrated plans for social development of the collectives, they will construct and put into operation 49,000 m^2 of housing, children's preschool institutions for 640 places, dispensaries for 200 places, and general rooms for 500 places.

The workers of the oil refining and petrochemical industry of the Ukraine assure the CPSU Central Committee and the Ukrainian Communist Party Central Committee that they will apply all their efforts, knowledge and creative energy to the successful fulfillment of the adopted commitments for 1982, and will worthily meet the 60th anniversary of formation of the USSR.

The commitments were discussed and adopted in the labor collectives of the enterprises of the oil refining and petrochemical industry.

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UKRAINIAN GAS INDUSTRY WORKERS ADOPT 1982 SOCIALIST COMMITMENTS

Kiev RABOCHAYA GAZETA in Russian 21 Jan 82 p 3

[Article: "Based on Further Intensification of Production: Socialist Commitments of the Collectives from the Enterprises and Organizations of the All-Union Industrial Association 'Ukrgazprom' for 1982"]

[Text] The workers of the enterprises and organizations of the all-union industrial association "Ukrgazprom," by responding with specific actions to the historic decisions of the 26th CPSU Congress have successfully fulfilled the increased socialist commitments adopted for 1981. They have extracted an additional 1.9 billion m^3 of natural gas, over 70,000 T of gas condensate, realized products of R 8.3 million, and obtained R 16 million of profit. The assignments were overfulfilled for labor productivity, transporting gas, drilling wells and production of light petroleum products.

Guided by the decisions of the November (1981) Plenum of the CPSU Central Committee, and the instructions of Comrade L. I. Breznnev for the need to surpass the set assignments for the production of fuel and energy, the workers, engineering-technical workers and clerical workers of the association have adopted the following socialist commitments.

They will fulfill the assignments of the 11th Five-Year Plan ahead of schedule, by the 68th anniversary of the Great October through the accelerated start-up of new fields, effective use of the production facilities for extraction and transporting of gas, introduction of new equipment and the leading experience. They will give to the national economy 5.5 billion m^3 of natural gas and 100,000 T of oil and gas condensate above the five-year plan, realize products for R 43 million and guarantee an above-plan profit totalling R 32 million. By supporting the patriotic initiative of the Tyumenskaya Oblast workers, the drilling organizations of the association have decided to drill 385,000 m of rock and finish construction of 130 wells under the complicated conditions of the extreme north at the Urengoy gas condensate field.

Striving to mark the 60th anniversary of formation of the USSR with new labor achievements, the workers of the association are obliged to extract 1 billion m^3 of gas above the plan in 1982 and 10,000 T of gas condensate, produce 2,000 T of light petroleum products, drill 1500 meters of wells, and realize products for R 8 million. By the 65th anniversary of the Great October Socialist Revolution, they will extract an additional 800 million m^3 of gas, 8,000 T of gas condensate, produce 1,500 T of light petroleum products and realize products for R 7 million.

Based on a further intensification of production, automation and comprehensive mechanization of labor-intensive processes, and more complete utilization of the advantages of the brigade contract, the workers will reduce the percentage of manual labor by 1 percent and release no less than 412 people at the active facilities to complete the personnel needs of the newly started-up facilities.

A set of measures will be introduced to improve the reliability and efficiency of the republic's gas transport system, develop underground storage and a network of main gas pipelines. Two cooling units will be put into operation at the fields of the Khar'kovskaya and Poltavskaya Oblasts to improve the quality of gas preparation. The volumes of repairs of gas-pumping machines and the main gas pipelines without stoppages will be increased, and their utilization coefficient will be brought to 95 percent. The workers will fulfill the plan for labor productivity by 101.5 percent and guarantee continuous supply of gas to the national economy according to the set limits.

They will reduce the outlays for production, decrease the expenditures for maintaining the control apparatus by R 712,000 and provide an annual above-plan profit totalling 6 million rubles. They will save 72.7 million kW-h of electricity and 153,000 Gcal of heat, 94 million m^3 of fuel gas, 72 T of chemical reagents, and 312 T of metal products. They will introduce into production 120 scientific-technical developments, 75 inventions and 3500 efficiency experts' suggestions, and will obtain an economic effect of R 12 million.

Together with the collectives of the construction organizations, they will ensure accelerated construction of the export gas pipeline Urgngoy-Uzhgorod, and put into operation the Yablunovskiy, Yaroshevskiy and Kapitanskiy gas condensate fields, 62 wells, 427 km of main gas pipelines, an installation of gas preparation in Dolina and 8 compressor shops.

By implementing the social program, they will train to new occupations and improve the qualification of 3300 workers, put into operation 33,000 m^2 of housing, the framework for the sanatorium in Pushche-Voditsa, a sanatorium-dispensary in Vorzel' and two cafeterias. They will guarantee the further development of auxiliary services of the enterprises, and build 3000 m^2 of greenhouses. They will assist the kolkhozes and sovkhozes to mechanize the animal husbandry barns, repair equipment, and perform agricultural work and shipping of the harvest, recultivate and transfer to agricultural another 20 hectares of arable land.

The workers of the republic gas industry assure the Leninist Communist Party Central Committee, the General Secretary of the CPSU Central Committee, Chairman of the Presidium of the USSR Supreme Soviet, Comrade L. I. Brezhnev that they will apply all their efforts, knowledge and experience to implementing the plans of the party for successful development of the country's fuel and energy complex, and will make a worthy contribution to implementing the great tasks of communist construction.

We call upon the collectives of the enterprises and organizations of the "Ukrneft'" association and Glavukrneftegazstroy to be actively included in the socialist competition for a worthy meeting of the 60th anniversary of the USSR, and early fulfillment of the planned 1982 assignments and the five-year plan as a whole.

The commitments were discussed and adopted at meetings of collectives of the association enterprises and organizations.
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FUELS

PAPER CALLS FOR GREATER UKRAINIAN COAL OUTPUT

Kiev PRAVDA UKRAINY in Russian 15 Dec 81 p 1

[Editorial: "More Coal for the Motherland"]

[Text] Construction of the mine "Dolzhanskaya-Kapital'naya" in Voroshilovgradshchina has entered the final stage. Preparation of the longwalls and the ventilation and transport mains linking them has been completed. Now the baton has been passed to the extraction complexes. They are passing the last adjustment before being started up. The brigade of N. V. Tikhonov has taken the first coal in order to test under load the production line of the enrichment plant that was built together with the mine. The future operators like the latest machines which can be controlled from a central panel.

The first phase of the mine is designed to extract 3 million T of anthracite per year, and with completion of the construction, it will increase output to 4.2 million T and will become the largest in Donbass. This is a weighty addition to the republic's coal industry!

At the November plenums of the CPSU Central Committee and the Ukrainian Communist Party Central Committee a lot of attention was focused on further development of the fuel and energy complex. Coal extraction in the Ukraine needs to be increased in 1985 as compared to 1980 by 10 million T. A sum of R 6 billion of capital investments has been allocated for this. The tasks are great and responsible. They arise from the increased demands of the national economy and the population for fuel. This means that we have to work well in order to reach the outlined borders. At the same time, primary emphasis is placed on intensification, and more complete use of the active facilities. There is experience of intensive work as the result of using internal reserves in the sector. We will take one of the leading mines, "Krasnogvardeyskaya," which is in Makeyevka of the Donetskaya Oblast. The collective fulfilled the annual plan of coal extraction back on 14 November. This is one of the oldest enterprises in the city, and it seems that the potentialities for increasing extraction had already been exhausted. However, the mining specialists refuted these assertions with their work. The party and trade union committees and administration are giving them every assistance in solving long-term questions, and helping them to successfully solve measures of a technical order. A new level has been put into operation this year, and two longwalls have been prepared. A mechanized complex has been introduced into one of them for the first time. Reconstruction is being completed of an underground transport to conveyerize coal delivery in the horizontal shafts, and fuel is removed by belt conveyers on the inclined shafts.

Because of intensification, the rates of extraction are rising in the shafts of the association "Dobropol'yeugol'," where the communists have issued the appeal: "Increased coal extraction through comprehensive mechanization!" It completed another two mines after "Belozerskaya" and "Dobropol'skaya": "Novodonetskaya" and the 21st CPSU Congress Mine. Equipment which does the extraction and delivers the fuel is active in all these longwalls. Work safety is guaranteed by metal sections which reliably cover the roof of the stopes. These "iron" longwalls have already yielded 82 T of coal from every 100 in the association. In addition to mechanizing fuel extraction, the equipment of preparatory work and underground transportation is being updated. Use of tunneling combines and conveyer lines is being expanded. All of this guarantees the success of the mining collectives. The association has fulfilled the main point of socialist commitments: since the beginning of the year, the 130-thousandth ton of above-plan fuel has been shipped to the consumers.

There are many of these examples. The mining collectives of the mine "Molodogvardeyskaya" of the association "Krasnodonugol'," "Nagol'chanskaya" No 1-2 of the association "Antratsit," imeni Zasyad'ko of the association "Donetskugol'" are ahead in their work. It is remarkable that "Nagol'chanskaya" was started up only a year ago, but today has already raised the 100-thousandth ton of additional coal. Good preliminary preparation was influential. The operators started working without bestirring themselves, therefore the facilities of the young enterprise are being confidently developed. This indicates that if the party, trade union and economic agencies, after uniting forces purposefully and in a businesslike manner solve the problems of coal extraction, the plans and commitments are not only fulfilled, but even overfulfilled.

Unfortunately, far from all the coal enterprises of the sector work in this manner. At the November plenum of the Ukrainian Communist Party Central Committee, the reasons for this were indicated. Such important tasks need to be solved as reducing the periods for preparing new levels and longwalls creating a reliable front of stoping faces, and strengthening the discipline at the mines. The attention of the Ukrainian SSR Ministry of the Coal Industry was focused on the need to significantly improve the use of the active facilities, especially those introduced in the Ninth and 10th Five-Year Plans. It needs to accelerate reconstruction and updating of mines which extract coking coal, significantly improve the level of mechanization of labor-intensive processes, especially on the thin sloping and steeply-falling beds.

We cannot be reconciled to the fact that the construction of new mines and coal pits, the introduction of facilities in their development take many years, often several times exceeding the established periods. This occurred with "Sukhodol'skaya-Vostochnaya." PRAVDA UKRAINY spoke of this in one of its issues. Moreover, construction of the mines went at a turtle's pace, and when it was started up, it was in a skimpy form, only for the accounts.

We have good experience on the timely start-up and development of coal facilities which we simply need to use. We recall "Zhdanovskaya-Kapital'naya" No 1. In erecting it, the mine builders used a number of valuable technical innovations, and introduced many useful ideas into the organization of socialist competition. "Dolzhanskaya-Kapital'naya" has something to gain in this respect. It is the direct duty of the specialists of mine construction, party and trade union committees to generalize the leading experience and to organize its practical introduction.

The first year of the 11th Five-Year Plan is ending. It was not easy for the republic coal workers. But they are faced with even more responsible tasks. It is now important to concentrate all the attention on them so that from the first days of the new year they will enter a production rhythm and provide the country with as much coal as it needs. All the prerequisites have been created for this, and all the potentialities are there. The famous decrees of the CPSU Central Committee and the USSR Council of Ministers to accelerate technical re-arming of the mines, improve the tariff rates and official salaries have been aimed namely at improving the work of the coal industry, and solving the problem of the fuel-energy complex. It is the basic duty of the Ukrainian SSR Ministry of the Coal Industry, leaders of the associations and mines, party obkoms and gorkoms, and party committees of the enterprises to organize their fulfillment well.

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BOGATYR' COAL PIT SOCIALIST COMMITMENTS OUTLINED

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 31 Dec 81 p 1

[Article: "Towards New Frontiers"]

> [Text] These are the socialist commitments of the collective of the "Bogatyr'" pit of the production association "Ekibastuzugol'" of the USSR Ministry of the Coal Industry for 1982 and the 11th Five-Year Plan.

The workers of the "Bogatyr'" pit of the production association "Ekibastuzugol'" in the atmosphere of high political and labor initiative are persistently implementing the decisions of the 26th CPSU Congress and the 15th Kazakhastan Communist Party Congress.

The pit collective accepted the results of the November (1981) CPSU Central Committee Plenum, conclusions and recommendations of the General Secretary of the CPSU Central Committee, Chairman of the Presidium of the USSR Supreme Soviet, L. I. Brezhnev with enormous inspiration as the fighting, specific program of action.

In response to the concern of the party and government about the growth in the welfare of the Soviet miners and the further development of the coal industry, the miners have extensively expanded socialist competition for worthy fulfillment of the 1982 assignments and the 11th Five-Year Plan. Having started a labor watch in honor of the 60th anniversary of the formation of the USSR, the workers of the "Bogatyr'" pit adopt the following socialist commitments.

Based on all possible increase in the efficiency of coal extraction, improvement in organization and control of mining operations, technical re-equipping of production, and the use of the leading experience, they will extract above the five-year plan 40,000 T of coal, including 1,000 T in 1982, and in the first quarter of the second year of the five-year plan, they will master the rated output of the enterprise. They will be actively included in the labor competition for the right to extract the billionth ton of fuel since the beginning of operation of the Ekibastuz coal basin.

They will continue to equip the pit with highly productive rotary excavators, and before the end of the five-year plan, assimilate five units with output of 3,500-4,500 T per hour, of them, two excavators in 1982. They will further mechanize labor-intensive auxiliary processes and reduce the specific weight of manual labor by 5 percent. They will introduce 480 inventions and efficiency experts' suggestions with an economic effect of R 80,000, including 140 suggestions in 1982 for R 205,000.

By concentrating production, improving the use of mining-transport equipment, and diminishing the losses of working time, they will provide an annual overfulfillment of the assignments for the growth of labor productivity of no less than 10 percent.

In developing the movement "Rated Output for Each Production Complex and Unit," by improving the technical operation and quality of equipment repair, by improving the skill of the service personnel, they will increase the coefficient of utilization of excavators by 10 percent, and their output 1.2-fold. They will bring the annual coal extraction by rotary excavator of RShRD-5000 type to 10 million T, and the specific weight of excavator brigades with complex organization of labor to 80 percent.

They will strengthen the struggle for economic consumption of material and fuel-energy resources. They will conserve 1.2 million kW-hours of electricity, of them, 460,000 kW-h in 1982. They will utilize re-use and reconstruction of rails, materials of the upper structure of railroad beds, and drilling tools to conserve R 100,000 of state funds before the end of the five-year plan. They will save R 200,000, 50,000 rubles a year by decreasing the net cost and improving the quality of the extracted coal.

By realizing the plan of social development of the collective, they will annually put into operation 1 24-apartment house in an economical manner, and in 1982 will complete construction of a cafeteria for miners. They will formulate and implement measures for a radical improvement in the condition of industrial hygiene for work safety. They will train no less than 160 people per year at courses for qualification improvement, and 40 for new occupations. They will include all the young workers who do not have secondary education in schooling in worker youth schools and technical schools, and further improve the efficiency of training of the workers in economic knowledge.

Considering the development of socialist competition for a communist attitude towardslabor is one of the important trends, they will encompass all sections, shops and brigades in this form of competition. Before the end of the five-year plan, they will achieve the high title of communist labor and high production efficiency.

They will further work for communist education of the upcoming generation in the GPTU-163 and the secondary school No 7. They will implement a set of measures to give chief assistance to the village workers.

They will continue socialist competition with the collectives of communist labor of the pit "Tsentral'nyy" of the production association "Ekibastuzugol'."

The workers of the pit will apply all forces, knowledge and experience for successful completion of the assignments of 1982, the 11th Five-Year Plan and the adopted commitments.

Socialist commitments were discussed and adopted at a general meeting of the pit collective.
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FUELS

TRADE UNION COAL MINERS CALL FOR HIGHER OUTPUT

Kiev RABOCHAYA GAZETA in Russian 7 Jan 82 p 1

[Article: "High Duty of Mining Honor"]

> [Text] Appeal of the heads and brigade foremen of the extracting section, delegates of the 13th congress of the trade union of coal industry workers to all workers, engineering-technical workers of the sector for a worthy meeting of the 60th anniversary of the formation of the USSR.

Dear Comrades!

The decisions of the 26th CPSU Congress have set great tasks before the workers of the country's coal industry. It is necessary to extract 775 million T of coal in 1985. In order to guarantee fulfillment of this assignment, the CPSU Central Committee and the USSR Council of Ministers have adopted important decrees regarding the technical re-equipping of mines, the development of the open method of coal extraction, as well as increase and improvement in wages for the coal industry workers.

The adopted documents are a confirmation that the Communist Party and the Soviet government are constantly concerned about the development of the coal industry, improving the working conditions, and raising the welfare of the miners. In response to this, many mining collectives have fulfilled the 1981 plan ahead of schedule. This is the first year of the 11th Five-Year Plan. The collectives of the sections and brigades of thousand-producers and their followers at the mines, open pits and other enterprises of the sector are in the forefront of socialist competition. The General Secretary of the CPSU Central Committee, Chairman of the Presidium of the USSR Supreme Soviet, Comrade L. I. Brezhnev has characterized the movement of thousand-producers as a communist attitude towards labor in practice.

In 1981, 420 brigades and sections guaranteed extraction from the stoping face of 1,000 T of coal and more per day, and 80 of them extracted 500,000 T and more each during the year.

Eight collectives of the brigades and sections achieved prominent labor success. Each of them extracted over 1 million T, and 4 of them, headed by M. P. Chikho, K. S. Markelov, P. I. Frolov and P. A. Yermakov achieved the million limit by Comrade L. I. Brezhnev's 75th birthday.

These collectives achieved their success because of the introduction of scientific organization of labor, the efficient use of mining equipment, high professional training, the observance of labor and technological discipline, great organizational and political work of the party, trade union, Komsomol organizations and engineering-technical workers of the sections and mines. In these collectives the pure working time of the combines, average coal extraction and labor productivity are 2-3-fold higher than on the average for the sector.

At the same time, we cannot be complacent about the fact that the coal industry recently did not fulfill the planned assignments for coal extraction. Many sections and mines did not cope with fulfillment of the plan last year. One of the reasons for this situation is the fact that the collectives of the brigades and sections did not achieve high work result in all the comprehensively-mechanized stopes, the number of collectives of thousands has recently been diminished, and the set assignment for their number is not being fulfilled. The development of the movement of the "thousand-producers" is being delayed by the untimely preparation of the new stoping faces, lengthy periods of assembly-disassembly operations of the mechanized complexes, the accident rate in the mining shafts, machines and mechanisms. The losses of working time are still great.

The work experience of the leading brigades, sections and mines is convincing that at each work site, in each labor collective there are reserves for increasing extraction of labor productivity.

In 1982 our country will mark the 60th anniversary of formation of the Union of Soviet Socialist Republics. In this anniversary year, the miners of the sector must extract 720 million T of coal and 35 million T of shale, increase labor productivity and improve other technical and economic indicators.

The sector has modern mines and open pits for this purpose. They are equipped with highly productive mining equipment, the necessary material resources and skilled workers and specialists.

Full use of these potentialities will not come by itself. This primarily needs work by the shock method, with complete giving of forces, broader development of socialist competition, better organization of labor and improvement in its productivity at each work site, and strengthening of the labor and production discipline, in a word, work more effectively. These requirements follow from the decisions of the November (1981) Plenum of the CPSU Central Committee, the instructions and conclusions contained in the speech of Comrade L. I. Brezhnev at this plenum.

Dear Comrades!

We the leaders of the extracting sections and brigades, delegates to the 13th congress of the trade union of workers of the coal industry, having discussed the results of the work of our collectives for 1981 and the tasks set for this year, in making a real evaluation of our potentialities and striving to have a worthy meeting of the 60th anniversary of the formation of the USSR, have adopted the following socialist commitments for 1982:

the brigade headed by N. N. Skrypnik (mining administration imeni Frunze of the production association "Roven'kiantratsit") will extract no less than 1 million T of coal during the year;

the brigade and sections headed by M. P. Chikhiy(mine "Mayskaya" of the production association "Rostovugol'"), I. I. Strel'chenko ("Trudovskaya" mine of the production association "Donetskugol'"), V. I. Ignat'yev ("Krasnolimanskaya" mine of the production association "Krasnoarmeyskugol'"), Zh. Igibayev ("Mikhaylovskaya" mine of the production association "Karagandaugol'"), Yu. P. Bronnikov ("Severnaya" mine of the production association "Vorkutaugol'"), V. G. Devyatko ("Raspadskaya" mine of the production association "Yuzhkuzbassugol'"), A. F. Peet ("Estoniya" mine of the production association "Estonslantes"), G. N. Smirnov ("Yubileynaya" mine of the production association "Gidrougol'"), Ye. M. Boldyrev ("Podmoskovnaya" mine of the production association "Novomoskovskugol'") will extract 500,000 T and more of coal (shale) each during the year;

the brigades headed by A. I. Belikov (mine imeni Bazhanov of the production association "Makeyevugol'"), S. K. Tokumtayev (of the mine imeni Gorbachev of the production association "Karagandaugol'"), V. I. Chernyak ("Novodonetskaya" mine of the production association "Dobropol'yeugol'"), V. P. Pyatakov (mine administration "Mirnoye" of the production association "Rostovugol'", I. D. Yavorskiy ("Khrustal'skaya" mine of the production association "Donbassantratsit") will extract 1,000 T and more of coal per day each.

Our commitments stipulate the adoption of equipment for socialist preservation and its efficient use, as well as increase in labor productivity, introduction of the leading experience, strengthening of the technological and labor discipline, and rendering of assistance to the lagging collectives.

In adopting the socialist commitments for 1982, we appeal to all brigades of the mining workers of the stoping face, mining foremen and engineering-technical workers of the sections and mines to expand even broader competition for the achievement at each comprehensively-mechanized stope of no less than 1,000 T of coal (shale), and when working thin and steep beds, no less than 500-700 T per day, and to guarantee a daily overfulfillment of the planned assignments for coal extraction (shale) by all the shifts, brigades and sections.

We call upon the collectives of "thousand-producers" to give their experience of work and to give supervisory help to the brigades working in the comprehensively mechanized stopes.

We appeal to the drilling brigades, to all workers and engineering-technical workers of the preparatory sections to be actively included in socialist competition for increase in the rates of tunneling the mining shafts and to guarantee timely preparation of the new stoping faces.

We appeal to the workers, mining foremen and leaders of the sections of the intramine transportation to continually provide the extraction and tunneling brigades with empty cars, to deliver materials and equipment to the stopes in time, and increase the reliability and smooth operation of all types of underground transportation.

We appeal to the machine builders and the workers of the scientific research and planning-design institute to accelerate the development and mastery of production of new mining machines and mechanisms, to increase the output of mechanized complexes and the spare parts for them, and to improve the quality and reliability of the mining equipment.

We appeal to the Komsomol youth collectives, to all the Komsomols and young people working in the coal industry for more persistent mastery of the new mining equipment, improvement in professional skill, more active mastery of the technical and economic knowledge, leading forms and methods of labor organization.

In the name of all collectives, we express the confidence that each worker, engineering-technical worker and clerical worker in the sector will skilfully and persistently aim their efforts in fulfilling the plans and socialist commitments for 1982. It is the duty of our mining honor to completely satisfy the needs of the national economy and the population for solid fuel, and to worthily meet the 60th anniversary of the formation of the USSR.

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KAZAKHSTAN COAL OUTPUT DROPS

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 17 Dec 81 p 2

[Article by M. Sergeychik, in-house correspondent of KAZAKHSTANSKAYA PRAVDA: "Repeat the Experience of the Rival"]

[Text] The sharp drop in work of the "Kirovskaya" mine was unexpected for many miners of the basin. In fact, the rates of coal extraction increased from month to month in the first 2 years of the last five-year plan, and the above-plan account of extracted fuel exceeded 100,000 T. But the mine has been among the lagging since the beginning of 1978.

Why did the leading workers give up their position? The situation at the enterprise has been studied by a special commission of the party gorkom and it provided a detailed answer to this question. It agreed with the opinion of the mine leaders that work of the stoping complexes has been considerably complicated because of the transition to bed A-7 of the "capricious" Ashlyarikskiy series. The scientists of the Karaganda Scientific Research Coal Institute were entrusted with issuing precise recommendations to the miners for controlling the roofs, in particular, testing the method of advanced shooting and hydraulic fracturing. But at the same time, the gorkom commission also indicated another reason for the lagging: proper attention at the mine is not given to the comprehensive development of mining operations. The stoping faces could not be developed to their entire width since the drillers daily underproduced over a thousand running meters of mining shafts. Work without consideration for the future naturally resulted in a lag.

The mine party committee occupied a clear and basic position of this situation. The efforts of more than 400 communists, trade union and Komsomol active members were aimed at correcting the situation at the work sites.

The miners of "Kirovskaya" have now been among the leaders in the basin for a long time. Since the beginning of this year, for example, over a 100,000 T of coal in addition to the assignment has been extracted. The following task set by the communists has become a reality: not to have any lagging subdivisions at the mine.

A lot has been done in the Kirovskiy Rayon in this direction in recent years. In particular, significant changes were made in the competition conditions, in which the indicators which take into consideration the smooth operation of production links occupied an important place in addition to other indicators. Using the experience of the Rostov workers, measures were taken under strict control to reconstruct the enterprises, develop new equipment and production facilities, that is, the basic components of stable activity. This course of the regional party organization yielded perceptible results. In the 10th Five-Year Plan, the miners of the region only produced almost a million tons of coal above the plan, and today over 2,000 tons.

The indicators of the miners of the Oktyabr'skiy Rayon, traditional leaders of the Kirov workers in competition are significantly more modest in this respect. The lengthy lagging of the mines "Stakhanovskaya" and "Karagandinskaya" had an effect. But precisely these enterprises headed the regional bulletin since the first weeks of this year. How did they reach a "plus" in extraction?

"We used the experience of the Kirov workers," relates the secretary of the party committee of the "Karagandinskaya" mine A. Pashkov "We first focused attention on the needs of the collectives of the production subdivisions, and held party and worker meetings there. At these meetings the collectives of three sections decided to extract no less than 500,000 T of coal, and a number of tunneling brigades decided to significantly surpass the planned limits for preparation of mining shafts. The communists suggested improving the material-technical supply, and long-term planning of work of the sections and brigades."

Unfortunately, the situation has deteriorated at almost all the remaining mines in the region even as compared to last year. The total debt for extraction has reached 300,000 T of coal, and it is increasing with each month. Not everyone has reorganized for work with regard for the long-term development of the mine as required by the decree of the CPSU Central Committee and the USSR Council of Ministers "On Measures to Accelerate Technical Re-Equipping of Mines in the USSR Ministry of the Coal Industry." Three of them are lagging in tunneling. What is the obstacle? There is an insufficient organization in activity by the raykom, and the primary party organizations. Thus, a regional school of experience has been set up in the brigade of tunnelers of the USSR State Prize laureate M. Kurnikov. There is really something to be gained here. It is sufficient to say that this collective completed the program of the 10th Five-Year Plan 8 months ahead of schedule. But the whole problem is that the studies in the school occur rarely and formally. The leaders of a number of mines do not place in the foreground questions of preparing new longwalls. As a result, the debt for tunneling mining shafts exceeding 2,000 running meters has been permitted since the beginning of the year.

By the way, the enterprises themselves are not capable of solving all the problems of filling the lines of stoping faces. A lagging has been permitted in capital construction. The example of the delayed introduction of a new level at the mine "Maykudukskaya" to replace the worked longwalls is characteristic. The appropriate schedules stipulated completion of this work back in 1979. Now the facility is far from complete readiness, especially its second phase. The unsatisfactory work of the mine builders severe [illegible] delays the miners. This is already the sixth year that they have been forced to use significant man and material resources for tunneling temporary mining shafts and equipping them with conveyers to the detriment of the planned work and the volume of extraction.

The transition of the extractors to new longwalls remains a problem at the mines. Disassembly and assembly of the equipment sometimes cause inexcusable delays for whole weeks. Contracts are not always worked out for cooperation between the miners and the administration "Spetsshkhtomontazh" of the association "Karagandaugol'." In the beginning of each year, a lot is said about this form of competition, but subsequently everything is reduced to mutual claims. The party gorkom acts as the principle arbitrater in this case.

At the same time, organization of competition within and between the regions, and this means a broad exchange of leading experience, and its universal introduction require more steady party attention. The annual concluding of a contract for competition in itself stipulates that the experience of the neighbor will not be foreign or inaccessible. In practice this point often remains on paper. We recall the exchange that was worked out together with the miners of the mine imeni Kostenko and imeni 50th Anniversary of the October Revolution. After the watch of friendship, there was a business meeting. The specialists of the mine imeni Kostenko, for example, discussed their work on setting up conveyers and installing bin-accumulators which does a lot to attain smoothness. The neighbors perceived this frankness as a fact causing melancholy reflections. This should not happen among competitors, for the contract is concluded in the beginning of the year not for a triumphant ritual, but for a specific purpose.

It is common knowledge that if you are complacent about what has been attained, an interruption will inevitably follow in the work. This precisely occurred at the mines imeni Kostenko, "Severnaya," "Mikhaylovskaya," and imeni Gorbachev. The party committees of the enterprises reduced their exactingness for the personnel for the entrusted business. The consequence was an ever increasing debt of lagging mines of the city which already exceeds 400,000 T of fuel.

For example, not so long ago the mine "Mikhaylovskaya" occupied the leading place in the association. But for 2 years in a row not a single monthly assignment has been fulfilled here. This did not happen suddenly, but as a result of the untimely preparation of the stoping faces, serious engineering miscalculations in equipping the longwalls of the second and fourth sections, and a drastically fallen labor discipline. Only after 6 months did the party committee hold an expanded meeting which analyzed the failures and omissions and defined measures to develop the mine for 2 years ahead. This of course is good. But the periods for overcoming the lagging are passing, and it is becoming more difficult to compensate for the omission.

The miners of the entire basin, including the Kirovskiy and Oktyabr'skiy Rayons of Karaganda are regularly visiting the mine imeni 60th Anniversary of the October Revolution in order to imitate the rich experience of stable work. In this case they always note the well-thought out long-term idealogical and technical policies of the party committee. Working the coal fields and preparing the new stoping faces are done in precise correspondence with the outlined plans. Labor competition has been precisely organized. Therefore there have been practically no interruptions here for many years.

The visiting of a rival in competition does not always result in a repetition of the experience. As before lagging coal enterprises operate for years next to leading enterprises, and as before the interregional competition has more a formal than a businesslike nature.

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BRIEFS

NEW SIBERIAN CITY-- At this site of the North Ob' region, at the intersection of the railroad line and the curve of the Pur River, settlements of oil workers, power engineers and river transport workers have already appeared. Time will pass, and an industrial city will grow up in the zone of permafrost. The city will have a population of 150,000 people and will be called Tikhiy. This future Siberian city will become the major center of the oil and gas region of the Tyumenskaya Oblast, an important railroad and river transport junction. Its general planner is the Leningrad Scientific Research and Planning Institute of City Designing and Building. The leader of the author's collective, Yu. Kutepov shows a mock-up of the general plan: "Here in the floodplain of the Pur River, where there is no permafrost because of the spring floods, there is a picturesque forest tract. Our task is to preserve it to the maximum. In developing the plan, we strived to alleviate the conditions of the harsh climate. The social center will be a group of buildings assembled into a single block. They communicate with each other by open passages. Thus, the resident of Tikhiy will be able to go from the general store to the hairdresser and the movie theater without going outside." [Text] [Moscow IZVESTIYA in Russian 26 Dec 81 p 3] [S. Krayukhin] 9035

POLAR OIL AND GAS STUDIES--The Timano-Pechora division of the All-Union Scientific Research Geological Exploration Institute [VNIGRI] for the first time has compiled a free coordination plan of scientific research work for the north European sector of the country for exploration of the oil and gas areas in the region. A new stage has begun in the exploration work in the Timano-Pechora province: study of the deeper layers and entrance into the regions of difficult access, the Polar Circle. The mineral explorers are encountering more complicated structure of the earth's depths, and consequently, an increase in the labor intensity of the searches. In order to correctly determine the point for drilling an expensive exploratory well, it is necessary to make a detailed study of the geological sections and the physical properties of the rocks. So-called parametric wells are drilled for this purpose. The reliability of the geological predictions depends a lot on the good quality and uniformtiy of the data obtained in this case. Now over 20 production and scientific organizations subordinate to 3 ministries are engaged in this work. Coordination of their work will avoid parallelism. [Text] [Moscow PRAVDA in Russian 17 Jan 82 p 3] [A. Kurkov, outside correspondent of PRAVDA] 9035

RAMALO-NENETSKIY GAS--The extraction of northern gas has more than doubled at the fields of the Yamalo-Nentskiy Autonomous Okrug in the last year of the current five-year plan as compared to 1981. Competition for early convergence of the daily extraction of a million tons of oil and a billion cubic meters of gas at the fields of the Tyumenskaya Oblast has also been widely developed at Yamalo. The volume of drilling operations in the okrug has also doubled. At the famous Urengoy alone about a thousand producer gas wells must be drilled in the five-year plan. Six giant pipelines will travel from here. The November (1981) Plenum of the CPSU Central Committee in the speech of Comrade L. I. Brezhnev called these pipelines the central construction sites of the 11th Five-Year Plan. The accelerated development of the gas industry predetermined the rapid growth of other sectors in the national economy of the Yamalo-Nenetskiy Autonomous Okrug whose population is growing exceptionally rapidly. It is planned to build apartments in this frigid polar kray during the five-year plan with a total area of about 2 million m^2. This is one-fifth of the housing that is planned on the whole for the Tyumenskaya Oblast. Almost R 4 billion have been allocated for residential and social-cultural construction in the 11th Five-Year Plan here. This is almost double what was spent for these purposes in the previous 10th Five-Year Plan. Workers from many republics and oblasts of the country have come to the aid of the northern Tyumen' workers. [Text] [Moscow IZVESTIYA in Russian 19 Jan 82 p 1] [V. Gilev] 9035

OFFSHORE GAS COLLECTION--This island which appeared on New Year's Eve above the Caspian waves 30 km from the shore does not owe its birth to the effect of volcanic forces, but to human energy. Assembled from standard metal structures, it is nevertheless unusual. The steel platform is equal in area to drilling areas, and differs from them in purpose because no wells will be drilled here. A large gas-collection station (GCS) has been placed on the "deck" of the base. Fuel from the deep high-output wells that are operating on the Bulla-more field will come here. There is enough equipment at the GCS, said the manager of the trust "Kaspmorneftegazstroy" F. N. Sultanov to the Azerinform correspondent, to equip an entire enterprise. The input and output assemblies with the systems of switching gates, the separator blocks, the system of oil pumps, the distribution collector, block of methanol added to the gas in the winter so that it does not freeze during transporting, diesel generator and much more are included. The gas collection station was built by industrial methods. All of its equipment was assembled on the installation platform at Zykh, and then the brigades of A. Konoplev and V. Risunov installed it on the platform. Rooms for the oil workers and general services are located 30 m from it, on a platform connected by steel bridge to the gas collection station. This distance guarantees the necessary safety. The base on which the gas collection station is located has been adapted for landing of helicopters, holding cranes and arrival of passenger ships. [Text] [Baku VYSHKA in Russian 3 Jan 82 p 2] 9035

GAS GENERATOR --The most powerful gas generator in the country has been put onto rated output in Kokhtla-Yarve in the association "Slantsekhim" imeni V. I. Lenin. It reprocesses a thousand tons of shale per day, 5-fold greater than the currently existing units. [Text] [Moscow EKONOMICHESKAYA GAZETA in Russian No 3, Jan 82 p 3] 9035

GAS LIFT OIL EXTRACTION--The last complex of gas-lift extraction of oil has been started up at the Barsa-Gel'mes field (Turkmeniya). A computer makes it possible to maintain the necessary gas pressure used to extract the raw material from the depths. [Text] [Moscow PRAVDA in Russian 17 Jan 82 p 1] 9035

LIQUID PARAFFIN--Two new complexes for production of 120,000 T of liquid paraffin each have been started up at the Mozyr' oil refinery and in the association "Novopolotsknefteorgsintez." The work in Mozyr' was done by trust No 6, and in Novopolotsk by trust No 16 Neftestroy of the Belorussian SSR Ministry of Industrial Construction. [Text] [Moscow STROITEL'NAYA GAZETA in Russian 17 Jan 82 p 2] 9035

TYUMEN' GAS PIPELINES--Two branches of the Urengoy-Uzhgorod gas pipeline and four branches of the Urengoy-center of the country route lie on the territory of the Mordovskiy Autonomous Republic. The territorial administration of construction has already prepared for the construction of the gas trunkline, compressor stations and residential settlement. The compressor stations will rise not far from the rayon center of Torbeyevo at the village of Krasnaya Polyana. The first of them on the Urengoy-Uzhgorod route will start up in the fourth quarter of next year. [Text] [Moscow PRAVDA in Russian 6 Feb 82 p 1] 9035

CASPIAN GAS EXTRACTION--18 January--The rapid growth in gas extraction in the Caspian has made it necessary to to build a new enterprise for collection, separation and transporting of the "blue fuel" that was erected on six steel islands in the sea. Regular supply of gas extracted from the deep wells to Bol'shaya Zemlya has begun. The greatest number of these shafts began to operate last year at the Bakhar field. The drillers made six deep wells here. They went to the multiple-formation deposit. Each shaft yields an average of 500,000 m^3 of gas per day. Even greater outputs were obtained at the Bulla-more field where the explored gas boundaries were successfully expanded. The successful working of these deposits and growth in efficiency of the geological exploration permitted extraction of 13.773 billion m^3 of gas in the Caspian last year. This is a record quantity for the entire history of offshore complexes. Despite the storms that broke in January on the coastal regions of the Caspian, the field workers are producing daily above-plan fuel. Over 30 million m^3 of natural gas have been extracted above the assignment since the beginning of the year. [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 19 Jan 82 p 1] [TASS correspondent A. Gol'denberg] 9035

OIL PUMPING MOTORS--Everyone is probably familiar with the common electric motor which externally looks like a small barrel turned on its side. But does everyone know that there are electric motors which are similar to a pipe tens of meters long? Our machine shop is producing them. Their unusual design was dictated by their sphere of application: the motor with such a long pump is lowered into a well and pumps oil. The competition "60 Intensive Labor Weeks for the 60th Anniversary of Formation of the USSR" was a great help in mobilizing the reserves. Here is how 2 intensive labor weeks of this year went,for example. Instead of the two electric motors that the shop collective planned to manufacture above the schedule every day, it produced three! Here is a fraction of the intensive labor of each person. After coming up with a successful tool, turner Yu. Andriyashin, milling machine operator V. Gaydukov and polisher A. Zlobin increased the output of the mills. The intensive labor of many other workers who are making the motor housing, operations of winding, impregnating, assembling and testing is a true guarantee that the January plan which includes almost 300 items will be finished ahead of schedule. I will add that the intensive weeks were also marked by the development of a more advanced submersible electric motor which is primarily designed for the workers of West Siberia. [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 19 Jan 82 p 1] [Ye. Novikov, senior foreman of the electromechanical plant imeni 50th Anniversary of the Great October Socialist Revolution] 9035

VUKTYL GAS OUTPUT--The collective of the Vuktyl gas field administration of the association "Komigazprom" produced almost a million cubic meters of above-plan gas per day on an intensive schedule last week. The gas workers of Vuktyl achieved these high rates during the competition in honor of the 60th anniversary of the formation of the USSR. Now the collective has more than 16 million m^3 of gas on its account which has been extracted in addition to the assignment. [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 31 Jan 82 p 1] [V. Krukovskiy, in-house correspondent] 9035

SULFUR DIOXIDE WELL USE--The sulfur dioxide which has caused many unpleasant problems for the drillers and oil workers has been forced to be beneficial by the field workers of the oil and gas drilling administration "Ordzhonikidzeneft'." They have been using an effective method of intensifying the beds, intrabed combustion, for many years to displace the viscous oil in their fields. The underground hearth thins the fuel and easily drives it towards the well. But complicated and expensive electric heaters had to be lowered underground merely to obtain this hearth. The efficiency experts of "Ordzhonikidzeneft'" successfully eliminated it. They were assisted by the sulfur dioxide which easily ignites during strong compression. It is now worth it to feed compressed air into the well. In several seconds, fire moves along the bed. This modification of the tested method for increasing oil bed output reduces the consumption of electricity in each well by more than a quarter. Now over 30 wells are operating in the oil and gas drilling administration "Ordzhonikidzeneft'" on the new method. [Text] [Baku BAKINSKIY RABOCHIY in Russian 16 Jan 82 p 3] 9035

POLTAVA GAS--The first gas gusher in the oblast burst forth 30 years ago at the Radchenkovskiy field. Since then, the geological explorers have discovered dozens of new fields on the territory of Poltavshchina. On New Year's Eve, the hundred billionth cubic meter of gas was taken from the underground storehouses. In the last 5 years alone, the geological explorers have discovered 7 new promising fields. The Semenovskiy and Chervonoyarskiy fields were started up by accelerated methods in the first year of the 11th Five-Year Plan. The search for new underground storehouses and increase in gas extraction are continuing. [Text] [Kiev PRAVDA UKRAINY in Russian 30 Dec 81 p 1] [N. Ponomarev, correspondent of PRAVDA UKRAINY] 9035

FIRST PERM' OIL--The first well of the field that was discovered in the northern Permskaya Oblast has now become a producer. There are another five wells to be started up next. "The intensive search for new oil sources is continuing in the oblast," said the general director of the association "Permneft'" R. Khabibullin. "However, our basic task is to reduce the net cost of each ton of oil and improve the servicing of the drilling wells. The method of comprehensive servicing of the field facilities will become more widespread. In this method, the brigade made of several people who have mastered two-three specialties have custody of over 60 shafts. Two-thirds of the wells are already being serviced by integrated brigades." [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 23 Jan 82 p 1] 9035

KARAKUMY GAS--The 26 wells of the new Erdekli field have started to produce about a million cubic meters of gas daily. This field was developed in Karakumy by the workers of the oil and gas extracting administration "Kumdagneft'." The geologists of the Order of Lenin production association "Turkmenneft'" transferred the area of Bugdayli which is promising for oil and gas to the operators in the second year of the five-year plan. Intensive exploration is underway in the underground storehouses at the new fields. [Text] [Moscow IZVESTIYA 4 Feb 82 p 1] 9035

YAMBURG GAS FIELD DEVELOPMENT--Yesterday the first sled-tractor train reached the eastern shore of the Obskiy Bay where the new large gas field of Yamburg is located. After successfully overcoming the 300-kilometer trip over snowy tundra, the expedition participants, led by the head of the section for gas extraction of the association "Nadymgazprom" G. Zotsenko, brought to the 68th parallel housing trailers, cafeteria, and mobile power plant. The building up of the northernmost natural gas field in the country has begun. A settlement has been set up and construction of a river port is planned. [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 26 Jan 82 p 1] [Yu. Belanov, in-house correspondent] 9035

1822/98

TOP-LEVEL COMMISSIONS TO MONITOR WEST SIBERIAN OIL-GAS COMPLEX

Moscow EKONOMICHESKAYA GAZETA in Russian No 3, Jan 82 p 15

[Article by V. Kuramin, chairman of the Interagency Commission on Questions of Development of the West Siberian Oil and Gas Complex and candidate of engineering sciences (Tyumen'): "The West Siberian Complex"]

[Text] The fuel resources that our country possesses will enable us to look at the future with confidence. A recently conducted refinement of West Siberia's reserves of gas, oil and condensate tells about this once more. The history of their conquest and economic development have entered firmly into the heroic annals of the Soviet people's achievements.

Tasks of the New Era

The recovery of oil (including gas condensate) in West Siberia is to be brought up to 395 million tons in 1985, gas to 357 billion cubic meters. Tasks of introducing production capacity at the Tobol'sk Petrochemical Combine, the Tomsk Chemical Plant and Surgut's GRES's, promoting the construction of a plant for producing chemical and oil-refinery equipment, strengthening the construction base, intensifying the construction of housing, social and cultural facilities and roads, and introducing the Surgut-Urengoy Railroad into operation have been assigned.

The fulfillment of these tasks complicates the complex's structure. The production volume of the processing industries--the gas-treatment, oil-refining and petrochemical industries--and the amount of capital investment will be increased correspondingly. The use of raw materials directly in Siberia is being expanded, and the pace of development of the social infrastructure will be raised.

During the 11th Five-Year Plan five large trunk gas pipelines are to be put into operation: the West Siberia-Central Economic Region pipeline and the Urengoy-Uzhgorod gas-export gas pipeline. These, as was stated at the November 1981 CPSU Central Committee Plenum, are central construction projects of the five-year plan and should be completed on time.

With the increase in scale of production activity in the region, questions of rational natural-resources utilization and protection of the environment will acquire increasingly greater significance. In particular, the level of casing-head gas utilization is to be brought up to the 85 percent level in 1985, and, at the end of the 11th Five-Year Plan, all effluent from thermal installations and the oil-tank farm pool will be used to maintain formation pressure.

Numerous associations and enterprises of almost 60 ministries will be engaged in the realization of these tasks. Each of them can be categorized arbitrarily under one of four groups.

The first consists of enterprises and associations of the complex's main profile for the recovery and processing of oil, condensate and gas, and also the generation of electricity.

Construction organizations, which create the fixed capital for the extractive and processing industries, comprises the second group. Enterprises of the third group make up the production infrastructure. These include transport, communications, construction-industry, building-materials industry and overhaul enterprises.

To the fourth group we assign shopping, municipal and personal services, public health, public education, personnel training, subsidiary agricultural enterprises and cultural institutions. These are the organizations and enterprises that are called upon to contribute to people's fruitful activity and to form a solid infrastructure.

Balanced and proportional development of all four groups of enterprises of various branches of the economy is a decisive prerequisite to realization of the tasks that have been set by the 26th Party Congress.

Problems of Control

The dimensions of the tasks which the numerous enterprises are being called upon to solve in unison, and, at the same time, their organizational isolation persistently require the creation of an interbranch coordinating center in the region.

The Commission of the USSR Council of Ministers Presidium on Questions of Developing the West Siberian Oil and Gas Complex and the Interagency Regional Commission under USSR Gosplan, to be headquartered in Tyumen', have been formed.

The Commission of the USSR Council of Ministers Presidium includes managers of a number of Union ministries and committees. The commission has already examined such questions as the construction of facilities for the oil and gas fields, the amounts of and priority guidance on pipeline construction, and the status and progress in carrying out the construction of facilities for housing, cultural and personal-amenity purposes.

The commission held a traveling conference in Tyumen' on questions of construction of the second phase of the Surgut GRES, the buildup of facilities for the Urengoy field, and further development of power engineering in West Siberia. The session was attended by, in addition to members of the commission, deputies of the chairmen of the Councils of Ministers of the Latvian, Lithuanian, Estonian and Belorussian SSR's, ministers and first deputy ministers of branches that are participating in assimilation of the complex, supervisors of party and soviet organs, and supervisors of Union committees and agencies.

The effectiveness of the responding measures that the commission adopted indicated once more how timely is the decision of the party and government about improvement of the management of the West Siberian complex.

The Interagency Regional Commission on Questions of Developing the West Siberian Oil and Gas Complex under USSR Gosplan (ZapSibMVTK) operates with a membership of 36. These are the secretaries of the oblast party committees and deputy chairmen of the oblast ispolkoms of Tyumenskaya and Tomskaya oblasts, managers of large economic agencies, and members and workers of USSR and RSFSR Gosplans.

The commission's tasks include overcoming agency isolation in solving regional tasks by the preparation of substantiated and coordinated plan solutions, the timely elimination of disproportions that arise by means of a balancing of plans, the preparation of recommendations for the State Plan for the Economic and Social Development of the USSR with regard to the West Siberian Oil and Gas Complex, and monitoring the fulfillment of plans.

The commission has a worker staff that is structurally a subunit of USSR Gosplan and exercises the rights of a USSR Gosplan section. It includes four subsections: planning the development of the oil and gas industry; capital construction; power engineering and the production infrastructure; and planning development of the social infrastructure.

The First Steps

The creation of the commissions for questions of developing the West Siberian Oil and Gas Complex is, in our view, the start of a great experiment in the formulation of a system for controlling regional production complexes.

In working out plans for the development of the West Siberian Oil and Gas Complex, we proceed from and consider some determining factors.

First of all is the growth in the amount of capital investment, which is more than 1 billion rubles each year. Enormous material and labor resources are required to assimilate such funds. Basically they should come from other parts of the country.

Of course, some portion of the labor resources can be trained by specialized training institutions of Tyumenskaya and Tomskaya oblasts and released to existing enterprises as a result of the mechanization of production processes. For example, during the last five-year plan 240 automatic transfer lines and continuous production lines were introduced at Tyumenskaya Oblast enterprises, work in 38 departments was automated, and progressive industrial processes were introduced.

These measures have enabled the release of more than 4,000 workers, who transferred to other production sections. But some internal reserves are still inadequate. We are still experiencing a constant demand for the recruitment of outside labor. From this comes the necessity to plan the anticipatory construction of facilities for housing, cultural and personal-amenity purposes.

Natural climatic factors are exerting a decisive influence on conditions for the delivery of bulk commodities: the lengthy winter, lack of roads and great distances. Consequently, these factors must be considered when planning both the deadlines for introducing new roads and dates for the delivery of goods.

The rapid pace of development of the complex and the severe natural and climatic conditions inevitably require the introduction of revisions in existing norms and standards. In construction this relates to earthmoving and concreting operations. The norms and regulations for the operation of machinery and mechanisms also have to be reexamined.

The West Siberian North sets its own terms for the forming of organizational structures and control systems. In the central regions special organizations and official posts on questions of survival are scarcely necessary, but they are required in Siberia.

Our commission, taking the named factors into account, examined in the second half of 1981 a large number of urgent problems of developing the complex. These had to include the problems that arise in connection with the lag in the development of power engineering, the shortage of labor resources, and the weak development of the transportation network.

We have prepared recommendations for a review by the Commission of the Council of Ministers Presidium and by USSR Gosplan about the fulfillment of party and government decisions about developing the region.

Our commission is also doing definite work connected with a study of economic ties within the complex and discovery of the factors that hold back its development or that burden its economy. In order to decide these questions, the commission is involving scientific-research organizations of a number of industrial ministries, the Siberian Division of the USSR Academy of Sciences, USSR Gosplan and USSR Gosstroy.

Accurate forecasting, planning and designing of the region's development in future periods--these are what West Siberia requires. Such a huge complex as the West Siberian Oil and Gas Complex can be shaped and developed only on a sound scientific base.

Science has helped to solve many urgent technical, economic and social problems, such as construction on marshland, development of the integrated-module method, the use of casing-head gas for generating electricity, the rotating-duty method for conquering the region, and many others. And yet science is in arrears to Tyumen'. Obviously, the time has come to establish scientific-research subunits in Tyumen'.

11409
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POWER SHORTAGE IN WEST SIBERIA THREATENS PLANNED OIL OUTPUT HIKES

Moscow STROITEL'NAYA GAZETA in Russian 11 Sep 81 p 3

[Article by G. Ovcharenko: "SG's [STROITEL'NAYA GAZETA's] Expedition to West Siberia--Problems, Experience and Recommendations"]

[Text] When competent people express different opinions on the very same question, that means that one of them is not presenting the true state of affairs.

"There is not enough electricity now," oil and gas field workers and builders told us. "If the power workers do not increase capacity in the shortest possible time, growth of oil and gas recovery will not be speeded up."

"I do not see a basis for special concern. Today, in any case," contradicted G. Davidovskiy, chief engineer of the regional electric-power administration (REU) Tyumenenergo.

I shall return to what can be expected in West Siberia tomorrow from Minenergo. Meanwhile, we shall explain whose side the truth is on today.

In Tyumen' we were shown a report prepared for a special session of the Interagency Regional Commission on Questions of Developing the West Siberian Oil and Gas Complex under USSR Gosplan. It followed from this that the power workers had done a lot of work in Tyumenskaya Oblast during the last five-year plan. Generating capacity in the amount of 1,260 megawatts had been introduced, and more than 5,000 kilometers of high-frequency power lines had been built. But when we compared these figures with others that marked the pace of build-up of facilities of the new fields, they realized that they had not done as well as would appear at first glance. It was the commission's conclusion: the Tyumen' power system does not satisfy the region's needs.

"That is not entirely so," again disagreed Garol'd Aleksandrovich Davidovskiy. "We are still short, of course, but we cover it through Uralenergo's capacity."

I very much wanted the REU's chief engineer to support his agency's name. But it is said, not without reason: facts are stubborn.

In the first place, as the economists explained, covering a shortage of local electric-power capacity through a neighbor's facilities costs the state in the millions. The gasline to the Urals stretches for 1.5 thousand km from Siberia, and the Reftinskaya GRES (Sverdlovskaya Oblast) is supplied with Ekibastuz coal. It would be much simpler and cheaper to develop generating capacity locally, where fuel resources are superabundant and electrical loads in the region are growing at an outstripping pace. But Minenergo thought about it too late, and so wood has to be brought into the forest.

"In the second place, the Tyumenskaya power-system concept is, in our view, entirely arbitrary," added chief engineer of the All-Union Tyumengazprom Association Yu. Topchev. "In the north of the oblast, where the main gas fields are located, including the Urengoy, we get practically not 1 kilowatt-hour from Minenergo. What kind of a covering of a deficit can be stated?"

Yuriy Ivanovich was not laying it on thick. Tyumengazprom itself is to this day compelled to construct so-called ESN's [power stations for in-house needs] and to use mobile and floating power plants, which are of small capacity and often go out of order, and to lay temporary power lines. As many as 2,000 people are engaged in the work of this ever-growing activity of gas-field workers. This in the North where every pair of hands is as expensive as gold--in the literal and figurative senses! And, incidentally, so is electricity. It is estimated that 1 kilowatt-hour is 3-fold to 4-fold cheaper if the gas-field workers get power from the REU.

"But even this is not the main thing," explained chief of the electric-power supply section of Tyumengazprom E. Korovin. "Our capacity is no longer enough for carrying out the plan, and there are neither the material nor labor resources for building new capacity."

The LEP [power line] from Surgut, where the power workers' main capacity is located, should have arrived in Urengoy last year. But at that time, when, after several changes of prime contracting organizations, Nadymelektroset'stroy [Nadym Trust for the Construction of Electric-Power Grids] finally took it over, only some supports had been set up. The new trust is working energetically today and is exceeding the standards, but its activity has been such that gas-field workers are not receiving power from the Tyumenskiy REU even this year. And Gosplan has meanwhile replaced the diesel drill rigs with more economical and productive rigs with electric drive. So now a good 10 expensive mechanisms stand idle. Because of this, at the Urengoy field alone gas-field workers are drilling about 50 fewer wells each year than the machinery would permit.

"But even this suffering LEP will not save us," says Yu. Topchev. "The pace of recovery is growing so fast that by the time it is introduced we will need 1½-fold more energy than it can transmit. This means that we will not be freed soon from the in-house power activity."

The situation is not much better with the oilfield workers, although their fields are mainly in the middle Ob'. That is, they are together with the Surgutskaya GRES.

"Not only during the buildup of facilities but also in the first 2-3 years of operation of the fields," said chief power engineer of Glavtyumenneftegaz [Main Administration of the Tyumenskaya Oblast Oil and Gas Field Industry], we worked without steady power. Right now we are turning over several oilfield facilities in the Uray region, but the 163 kilometers of LEP from Zapsibelektroset' [West Siberian Electric-Power Grid] is only beginning to be built."

The oilfield workers, like the gas-field workers, are trying to escape the peak-power situation by their own efforts. But they have neither the skilled personnel nor the special equipment, nor the authorization for materials and equipment. So in-house construction would eat up colossal resources, and its KPD [efficiency] would be miserly.

"The unreliability of the power-supply schemes," continued V. Mikinin,"is still our whip. In the first half of this year alone, because of emergency shutoffs in Tyumenenergo, our shortfall of oil to the country was as much as Urayneftegaz delivers in a week...!"

Now let us return to what the Tyumenskaya Power System will be like tomorrow. It turns out that there are still great problems here.

In order to support the necessary growth in oil and gas recovery, it is planned to introduce generating enterprises for 5,800 more megawatts in Tyumenskaya Oblast during the current five-year plan. But Minenergo, pleading shortages of resources, plans to add only about 3,120 megawatts by 1985.

However, even this reduced program is already threatened by failure, because of some confusion over financing and the poor construction and installation capacity of Minenergo subunits in the regions. The prime contractor's plan for the first half of the year was fulfilled by only 87 percent.

In brief, today and in the very near term, West Siberia's oil and gas complex--and the power workers are not trying to demonstrate the opposite--will experience serious difficulties. The Interagency Regional Commission under USSR Gosplan came to that conclusion, stressing that development of power capacity in the area lagged by practically a five-year plan compared with the development of oil and gas recovery.

Minenergo absolutely cannot understand this. But instead of taking decisive measures to correct their own errors, they propose, as has already been said, to understate the directive governing the plan for growth of electrical capacity in West Siberia. And they cite extremely weighty factors. The power engineers in West Siberia are short about 14,000 workers. And attracting them to this place is impossible, since there is no housing. But indeed the other ministries began in this district, as they say, entirely from scratch. Why not take advantage of their experience?

Why not try to arm themselves, let's say, with the rotating-duty expeditionary method of construction, which has proved itself so well in the area? The ministry has the material and labor resources for this purpose. If you glance at a map of Minenergo construction projects today, many of them do not have any relationship with electric power at all. Moreover, the capacity of many large subunits, for example Taymyrenergostroy [Taymyr Power-Engineering Construction Trust] and Uralenergostroy [Trust for the Construction of Power-Engineering Facilities in the Urals Economic Region], are not being used fully. And indeed they have quite a bit of experience in working in the North's conditions.

The rotating duty expeditionary method could help to solve many problems, not only in the creation of new power capacity but also in the housing inventory. Meanwhile the plan for introducing housing for power-engineering workers is carried out by scarcely half, which intensifies their difficulties even more.

The poor pace of construction today is explained to a great extent by the practically complete absence of a construction-industry base for Minenergo subunits in West Siberia. But even this is a consequence of a tactical oversight by the ministry itself.

Two years ago the Soyuzzapsibenergo and Soyuzzapsibenergostroy Associations were established. They are responsible for the operation and development of power capacity in the Komi and Tatar autonomous republics and in West Siberia. But the Urals were not included in the operating zone of the new associations for some reason. Although it is precisely from here that the West Siberians have been compelled to dip into the electric-power supply to cover Tyumenenergo's shortage of capacity, and it is precisely here that a well-developed construction-industry base is operating, which at the very start could have helped to establish the new collectives. Without it, a minimum of 5-7 years is necessary to arrive at the planned goal.

The effectiveness of the proposed measures is obvious. More than once the oblast's economic and party workers have recommended resorting to it. But Minenergo does not pay attention to advice. Perhaps because in past years the power workers were able to revise plans by way of a reduction. Judging by everything, they are hoping that allowances will be made for them also during the current five-year plan.

Only it is doubtful now whether the Interagency Regional Commission under that same USSR Gosplan that previously accepted Minenergo's proposals will permit this. Judging by the commission's first steps, it is decisively inclined to cut short the agency approach to the buildup of facilities for the oil and gas complex and to kinks in the development of its economy. Still, whatever you say, it is good when a competent organization turns up on the field of action!

It would not be bad to transfer the staffs of both Soyuzzapsibenergo and Soyuzzapsibenergostroy to Tyumen' in accordance with their designations. It is quite difficult, perhaps, to manage from Moscow the creation of capacity in West Siberia. What also confirms the current unmanageability of Minenergo subunits in Tyumenskaya Oblast, as S. Visotsky, chairman of the Tyumenskaya Oblast Planning Commission has emphasized, is the results of their work....

"If our misfortunes come from a shortage of electrical energy," said Tyumenskaya Oblast CPSU Secretary Ye. Altunin at my departure, "then the Minenergo's misfortunes come from a shortage of practical energy."

A more precise conclusion for these notes cannot be devised.

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